DOKOM CS

User manual 2.0

Contents

0 INTRODUCTION 0-4

0.1 GENERAL 0-4
0.2 SUPPORTED READOUT METHODS 0-4
0.2.1 FIXED CENTRALISED READOUT 0-4
0.2.2 DECENTRALISED STATION READOUT 0-2
0.2.3 MOBILE READOUT 0-3

1 STATIONS, CHANNELS AND USER GROUPS 1-4

1.1 STATIONS 1-4
1.2 CHANNELS 1-6
1.3 USER GROUPS 1-6

2 AUTOMATIC READOUT OF METERS 2-7

2.1 DATA EVALUATION AND EXPORT 2-8
2.2 REQUIREMENTS 2-9
2.3 COMPONENTS 2-9

3 INSTALLATION OF DOKOM CS 3-10

3.1 SYSTEM REQUIREMENTS 3-10
3.2 INSTALLATION 3-10
3.2.1 DOKOM CS WITH WINDOWS 9X, NT, ME, 2000 3-10
3.2.2 LOADING OF EXTRA COMMUNICATIONS DRIVERS 3-11

4 CONFIGURATION 4-13

4.1 AUTOMATIC CREATION OF DATABASE AND STATIONS 4-13
4.2 AUTOMATIC METER SEARCH 4-14
4.3 CREATING USER GROUPS 4-16
4.4 USING MAPS 4-18
4.5 MANUAL SETUP 4-20
4.5.1 SETUP OF NEW CHANNELS 4-21
4.5.2 SIMULATION (HEAT AND WATER METER) 4-22
4.5.3 RS232 (M-BUS) 4-23
4.5.4 SETUP OF THE METER 4-23
4.5.5 STARTING THE READOUT 4-24
4.5.6 LANGUAGE SELECTION 4-25
4.5.7 OPTIONS 4-25

5 READOUT 5-27

5.1 SCHEDULER 5-27
5.2 PROCEDURE TYPES 5-27
5.2.1 READOUT FOR BILLING 5-28
5.2.2 READOUT FOR VERIFYING 5-29
5.2.3 LOGGING READOUT 5-29
5.2.4 READOUT FOR EXPORT 5-30
5.2.5 SPECIAL PROCEDURES 5-31
5.2.6 MOBILE READOUT 5-31
5.3 PROCEDURE REPLICATION 5-31
5.3.1 MONTHLY READOUT 5-33
5.3.2 WEEKLY READOUT 5-34
5.3.3 DAILY READOUT 5-34
5.3.4 PERIODIC READINGS 5-35
5.4 ONLINE-GRAPHICS 5-36
5.5 CHANGING OF READOUT PROCEDURES 5-38

6 USING MAPS 6-39

7 EXPORTING THE READOUT RESULTS 7-41

7.1 DATA EXPORT 7-41
7.2 EXPORTING GRAPHICS 7-46

8 MRAPI-MANAGER 8-49

8.1 HANDTRACK-DRIVER 8-49
8.2 RS 232 – DRIVER: 8-5
8.3 MODEM-MBUS – DRIVER: 8-8
8.4 SIMULATION (HEAT AND WATER METERS): 8-12

9 INDEX 9-1

0 INTRODUCTION

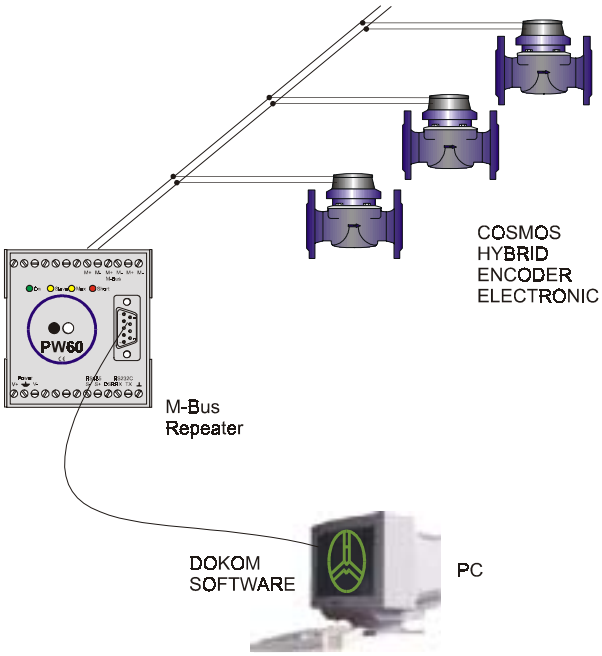
0.1 General

DOKOM CS is a software solution that enables the readout of equipment with a M-Bus interface. Primarily these devices are consumption meters, e.g. water meters, caloric meter or also electricity meters, which are interrogated with the M-Bus protocol. The software can be used for the readout of individual M-Bus devices and due to its modular structure is also adaptable for M-Bus-installations with hundreds of M-Bus devices.

0.2 Supported Readout Methods

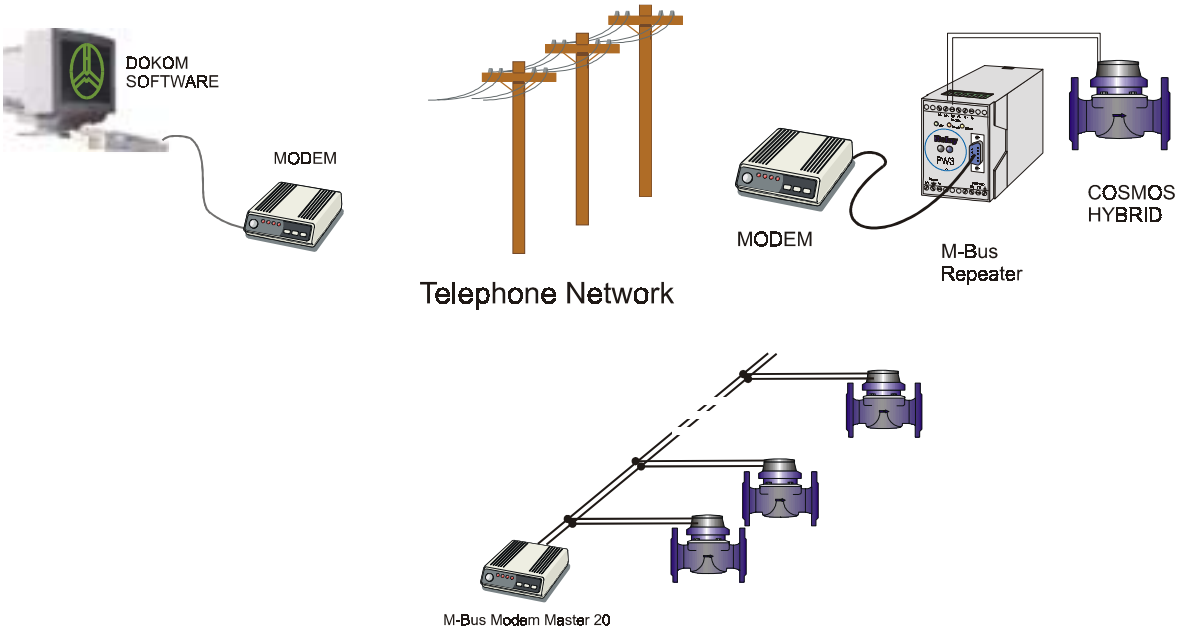
0.2.1 Fixed Centralised Readout

The data can be read in different ways. DOKOM CS supports readouts with the help of a M-Bus central. Therefore registers, which support the M-Bus protocol, can be readout over distances that may be up to several kilometres.



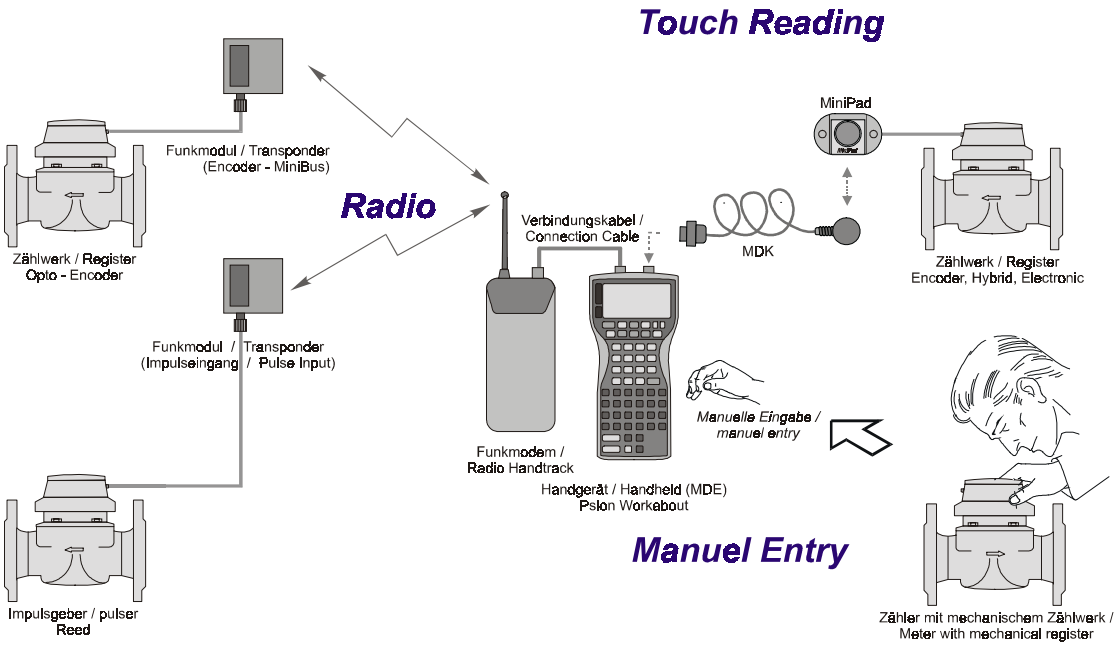
0.2.2 Decentralised Station Readout

If the readout distance is not sufficient, then the meters can be connected by either; wire connections, telephone modem and/or radio modem. Also sub-stations can be formed with larger systems.



0.2.3 Mobile Readout

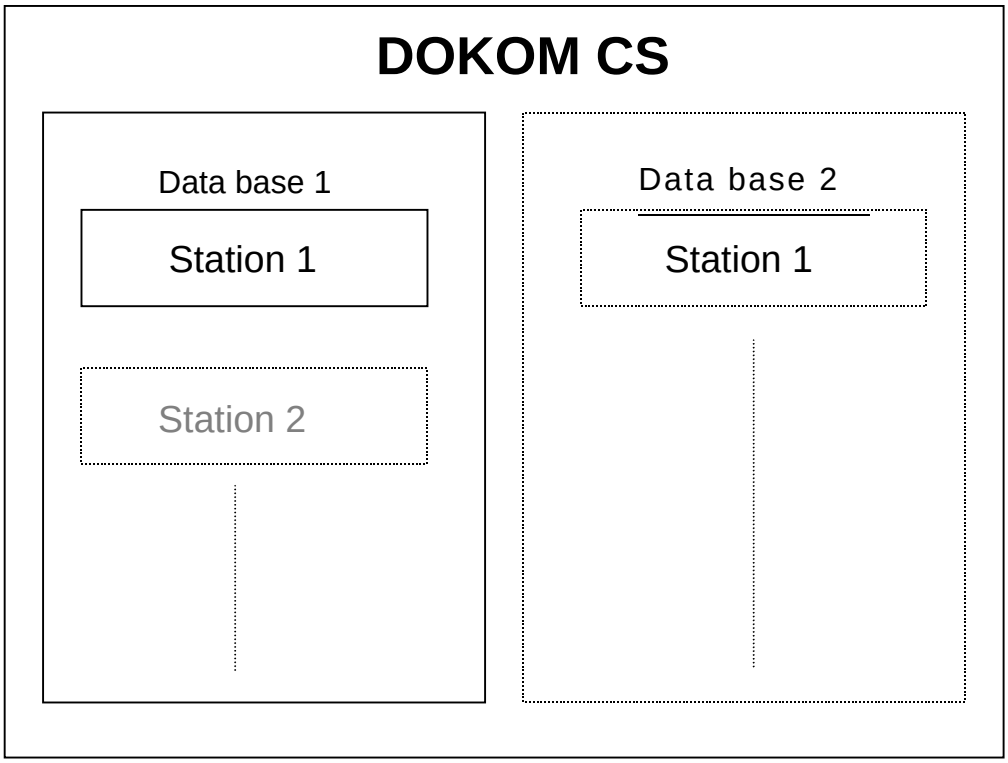
In addition the data can be processed with DOKOM CS through either portable hand computers with manual data input, inductive coupling or by radio transponders.



1 STATIONS, CHANNELS AND USER GROUPS

1.1 Stations

Core to the administration of the data in DOKOM CS is a data bank structure. DOKOM CS is also able to administer several data banks. However in normal applications only one data bank is created. Within this data bank one or more stations are created. A station allows for adjustment to be made to the channel and the meter.



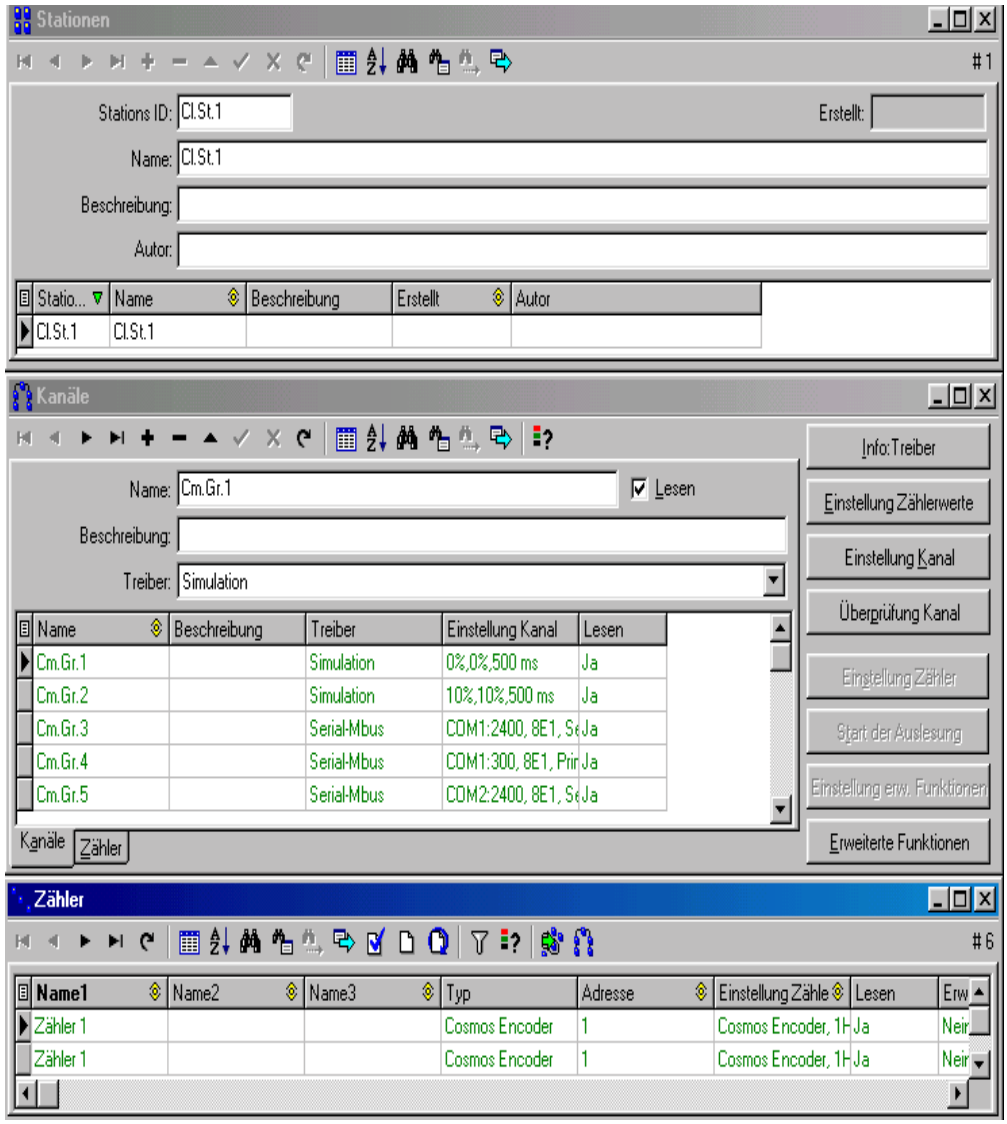
Generally the creation of one station is made for each computer. For the mobile application where apartment blocks are to be readout it may be advisable to create a central on the laptop for each of the stations. Then, on location, this station can easily be selected without any further adjustment.

DATA BASE

STATION

CHANNEL

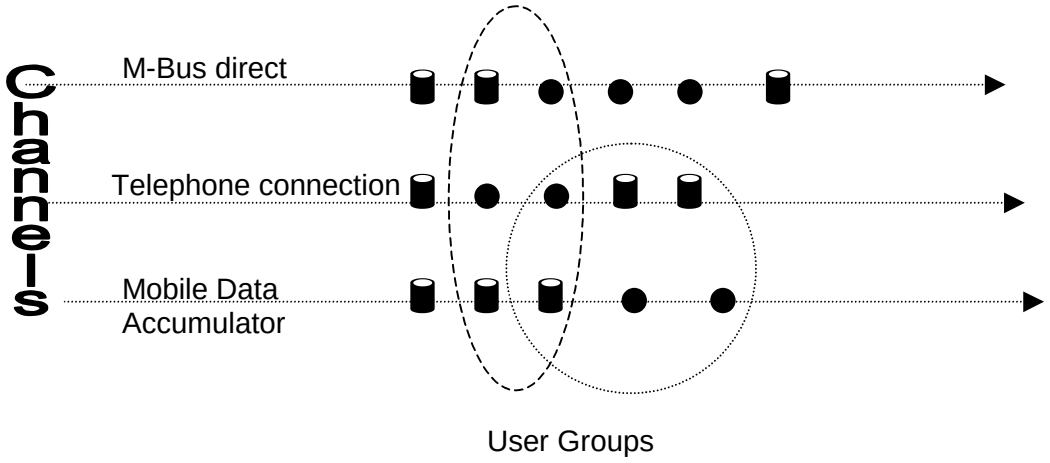
METERS



In the above picture one sees the structural build-up of a database. The Database created in the beginning contains a station. A station ID, a name, a description and a name of the author can be assigned to the station. Then the accordingly created channels and the counters stored within it are assigned to this station. After calling this station an immediate selection of M-Bus devices can be readout without having to configure anything in the beginning.

1.2 Channels

DOKOM CS supports readout in various ways, e.g. directly over an M-Bus cable connection to the serial interface of the PC, indirectly via a telephone modem, radio transmission or mobile data collection. These different ways are classified as channels. For each of these channels a so-called MRAPI driver must be installed in DOKOM CS. The DOKOM software has MRAPI drivers for the support of all possible channels.



1.3 User Groups

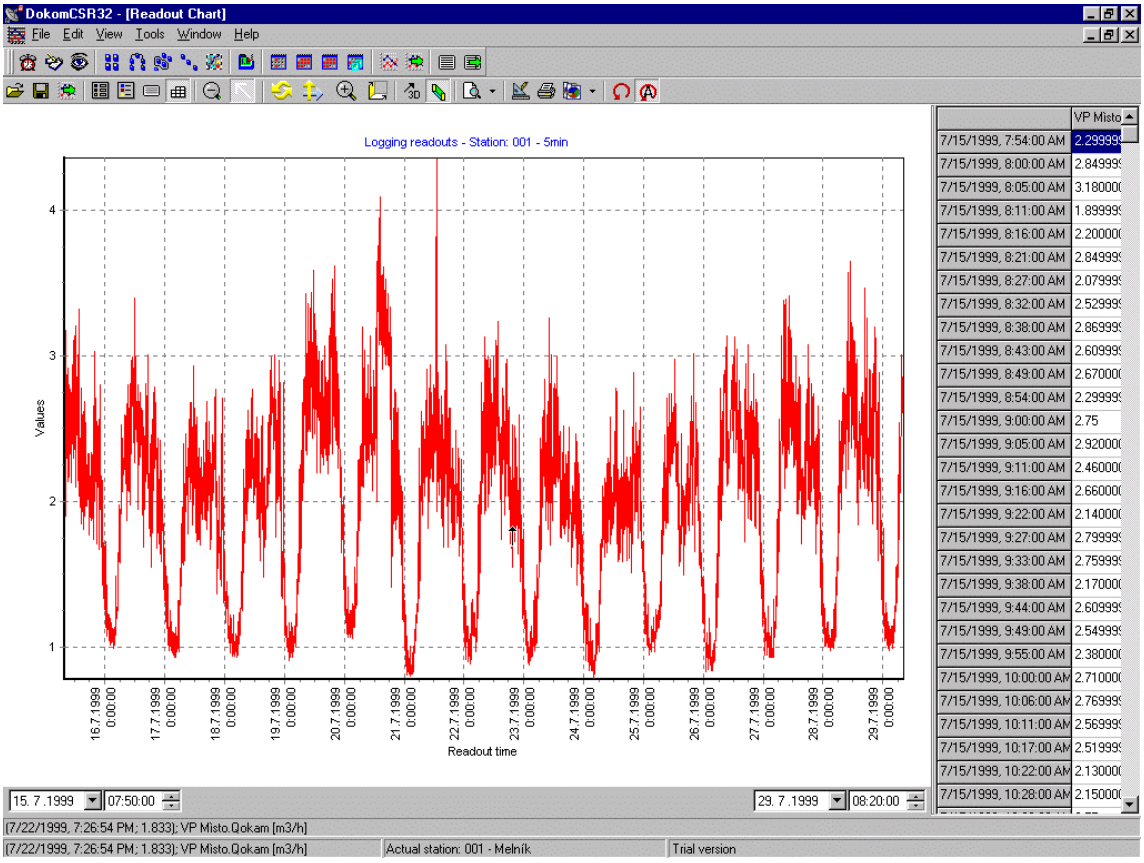
The transmission paths, i.e. the channels, do not necessarily show the allocation of the readout, which the user wants. Therefore it could be technically meaningful to connect electricity gas and water meters to one M-Bus central. If the user would like to select only the water meters, then these should collectively be placed in one group for readout. Such a group is called a user group.

The user group can be applied by distributing it over different channels. E.g. if the counters of a separate billing customer are readout over a m-bus central and others for reasons of distance by telephone connection, then one can summarize all these counters into a user group.

Each counter can be allocated easily to different user groups without any difficulty. E.g. a consumption meter allocated to a user group, which must be billed every month. The same meter can also be placed in a user group, which is read daily for reasons of leakage detection.

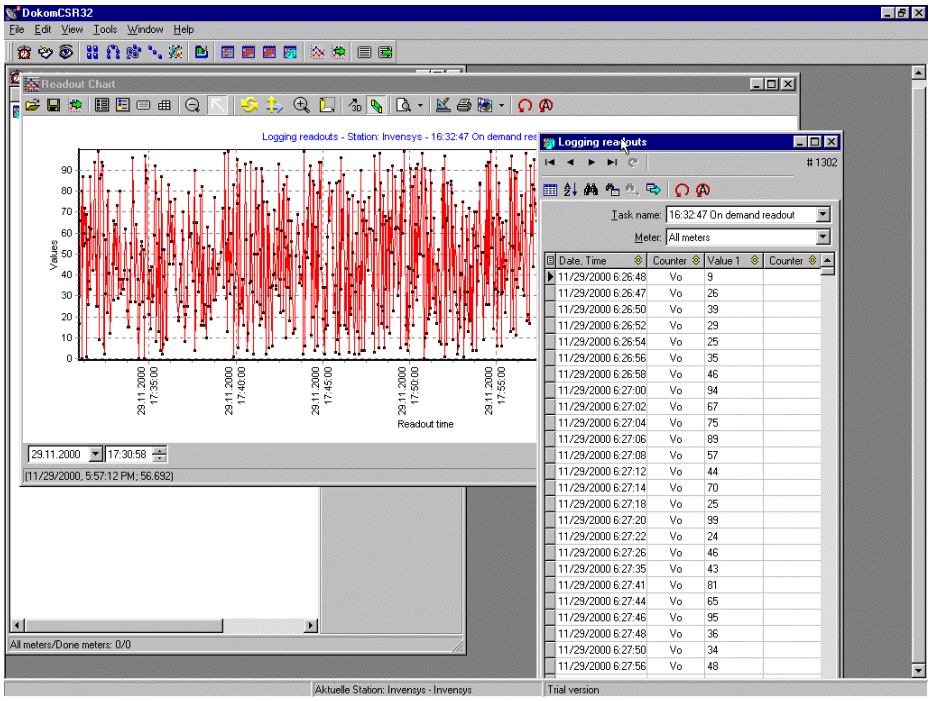
2 AUTOMATIC READOUT OF METERS

A so-called scheduler controls the automatic readout of meters. Into this scheduler the readout instructions are executed by DOKOM CS at the selected point in time. The instructions can be automatically executed periodically, e.g. annually within the space of several seconds. The readouts can be created for different purposes: As readouts for accounts and readouts for the examination of the meters and the system. Additionally readout tasks can used to determine so-called user readout instructions. The readout results under Options, Readouts, can then automatically be exported as a file. A further possibility exists within the datalogger function. The meters can be readout and the results are displayed directly and on-line.

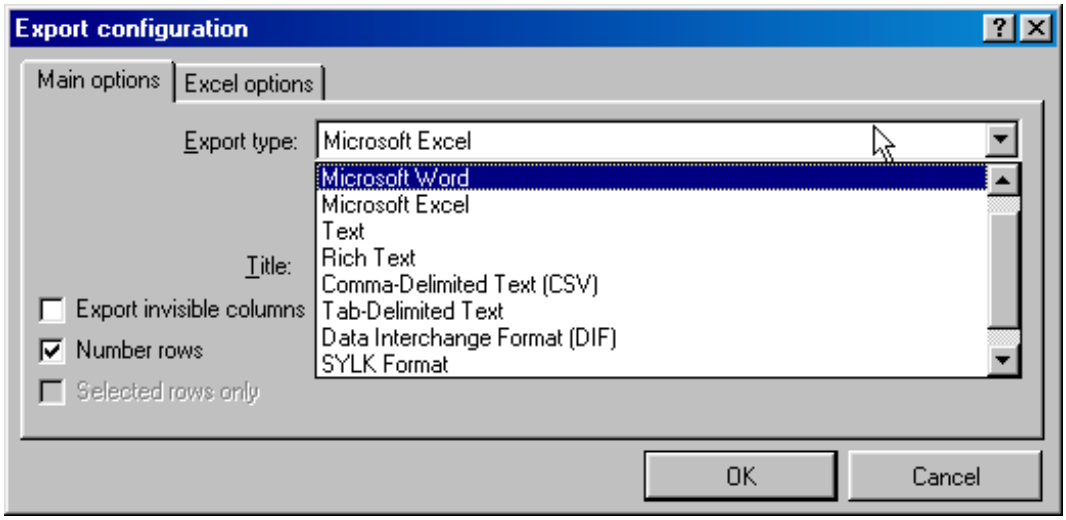

DokomCSR32 - [Readout Chart]
File Edit View Tools Window Help
Logging readouts - Station: 001 - 5min
Values
Readout time
VP Misto
(7/22/1999, 7:26:54 PM; 1.833); VP Misto.Qokam [m3/h]
Actual station: 001 - Melník
Trial version

2.1 Data Evaluation and Export

The data can be represented both tabular and graphically.



The readout data can be processed and displayed with DOKOM CS or exported to further application programs. Well-known standard formats are supported:



2.2 Requirements

For the application of DOKOM CS the necessary cabling and meters are a prerequisite. DOKOM needs the installation of the counters and the necessary wiring necessary for application. The installed meters must be completely configured.

Before a readout of several meters can implemented, each individual counter with an must be programmed with a M-Bus-Address. That can be executed with the appropriate software. When programming the meters care must be taken that each M-Bus address is unique, i.e. no address is used twice.

DOKOM supports the primary programmed M-Bus devices within a search as well as the secondary addresses.

2.3 Components

DOKOM CS consists of three Software Modules

DOKOM Configuration, for adjustment of the meter as well as input of the necessary configuration details of the channels for readout. It is also for the creation of user groups. For test purposes an existing M-Bus device can be readout in one of the module on one channel.

DOKOM Reading, for the readout of the meters as well as for the representation of on-line graphics. Additionally the readout data can be processed further in this module.

MRAPI manager, for the administration of the different communication channels. Depending on which driver is installed, the meters can be readout over wire, telephone, radio or also with mobile readout devices.

3 INSTALLATION OF DOKOM CS

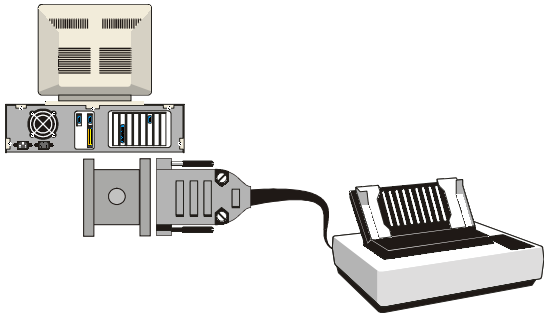
3.1 System Requirements

To use the DOKOM CS software these are the minimum requirements:

- 200 MHz Pentium Computer or higher
- Windows 95, 98 or ME
- Windows NT and Windows 2000 including higher versions
- Microsoft Internet Explorer 4.0 or above
- Serial Mouse
- Graphics card with a minimum resolution of 800 x 600 Pixels and 256 colours
- 32 Mbytes RAM
- 20 Mbytes of hard disk space
- Minimum of 1 free serial port

3.2 Installation

3.2.1 DOKOM CS with Windows 9X, NT, ME, 2000



DOKOM CS is copy-protected for legal reasons. To the license a copy a protection plug (Dongle) has to be used with the program. The plug is connected to the parallel interface (Printer port LPT1). A printer can then be attached to the Dongle. The plug connection should be secured by screwing it in. The Dongle must also be attached

with each new restart of the computer. It is recommended that the plug reamain attached to the PC.

⇒ Start computer as usual

⇒ Windows boot up

⇒ Within Explorer select the executable file as the installation medium

⇒ *Execute the program with a double-click*

⇒ *Follow the instructions*

The setup program will create a new program group called “DOKOM CS32” after a successful installation.

Now DOKOM as well as (MRAPI) and the M-Bus driver managers have been installed onto the computer.

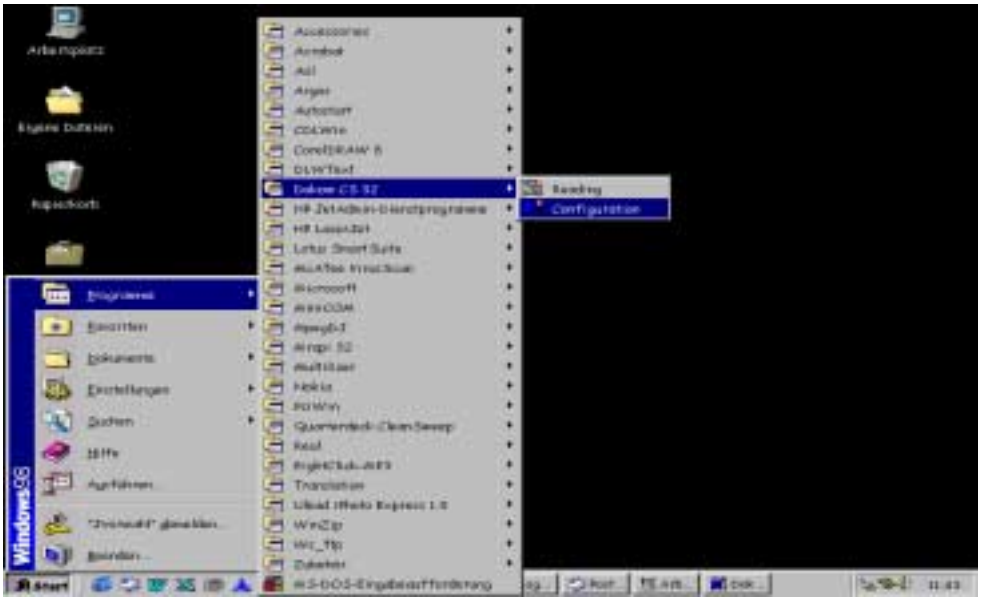
In order for the program to function properly it is necessary for entries to be made in the registry file. With Windows NT systems the administrators rights must be freed up. Please note that for the installation ask you system administrator to share the registry file and to deactivate any anti-virus programs that may be operating. With Windows NT it is recommended that after the installation of DOKOM CS, all Service Packs be reinstalled.

3.2.2 Loading of Extra Communications drivers

If the readout to is to take place by telephone, radio or something similar the appropriate drivers must be loaded. We develope new drivers for other media and offer then through our web page. There one can find, if necessary, new drivers for new applications or appropriate updates.

DOKOM CS independently detects the language of the installed Windows version. If the English version is installed instead of the German Windows version, then DOKOM starts in the English language. The language can be manually changed at any time. If the language of a Windows version is not supported, then DOKOM automatically selects English.

Furthermore it is assumed that there is a basic knowledge in using Windows©. If not then we recommend that this be done beforehand. A suitable exercise program is contained within WINDOWS. For further notes please refer to your system manual. We will gladly assist you with any further queries. Use our hotline in such cases. The telephone numbers can be taken from the software registration.



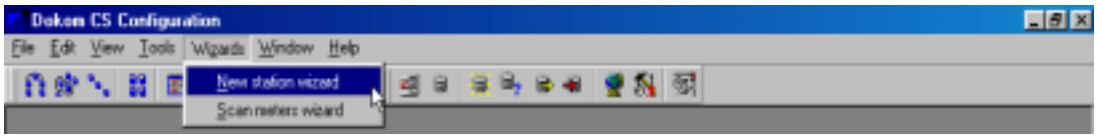
After the successful installation of DOKOM CS, a file with the name DOKOM CS32 is created in the program directory.

By clicking on Start, Programs, DOKOM CS32 and then Configuration, the configuration program of DOKOM is started.

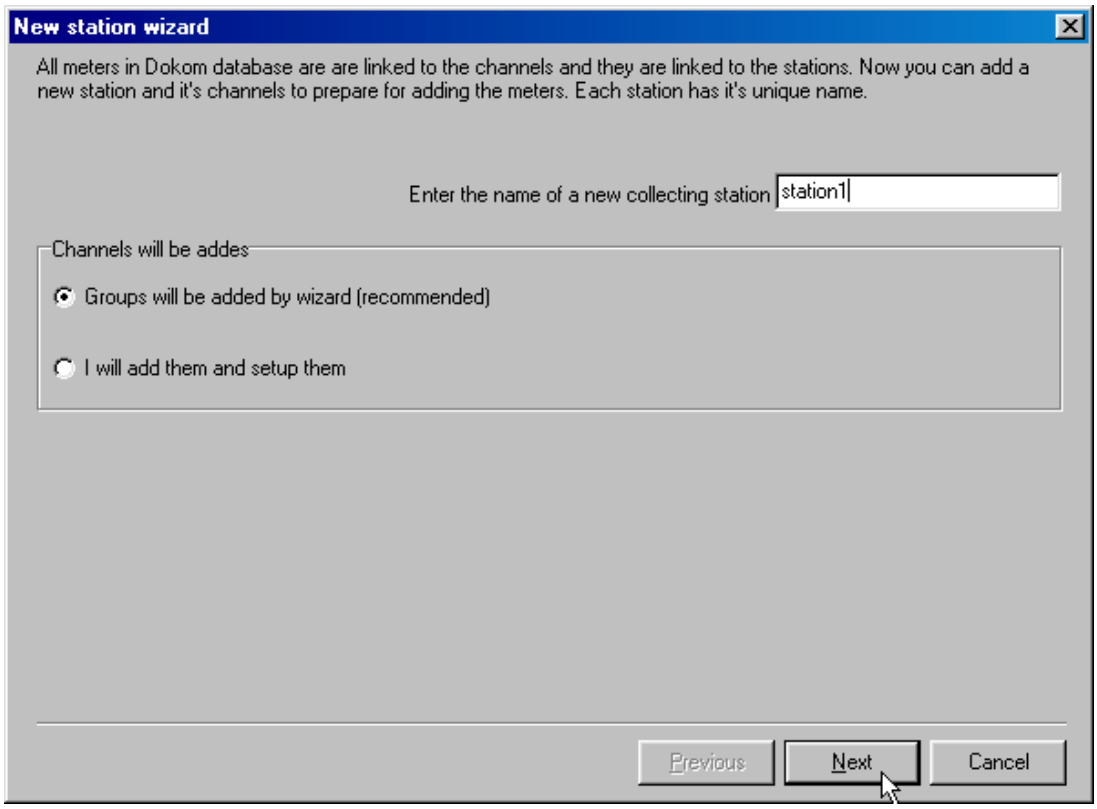
4 CONFIGURATION

4.1 Automatic Creation of Database and Stations

For users who are working with DOKOM CS for the first time it is recommended that you use the assistant. This assistant is automatically started with the first start up of DOKOM. A manual start of the assistant can be executed as follows. Start the assistant by clicking on *Assistant* and afterwards on *Assistant for the creation of a new station.*

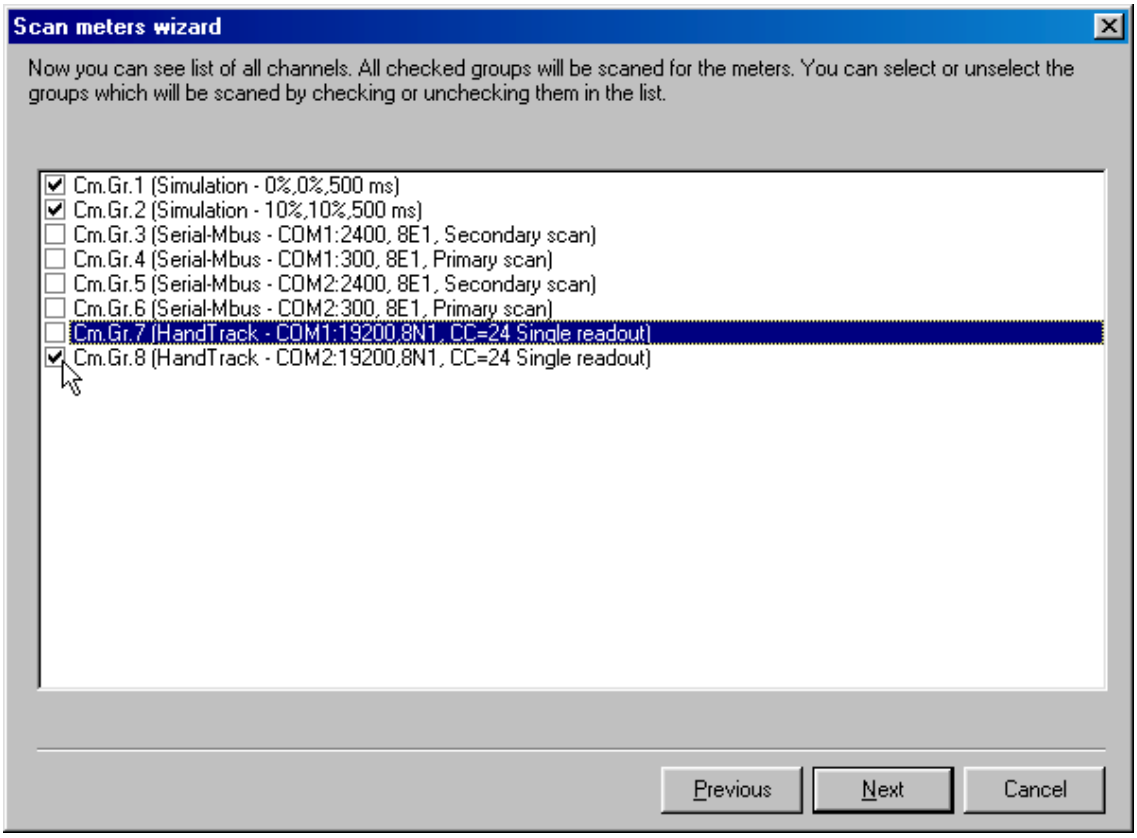


The meaning of the terms Station, User groups are described in the introductory sections.

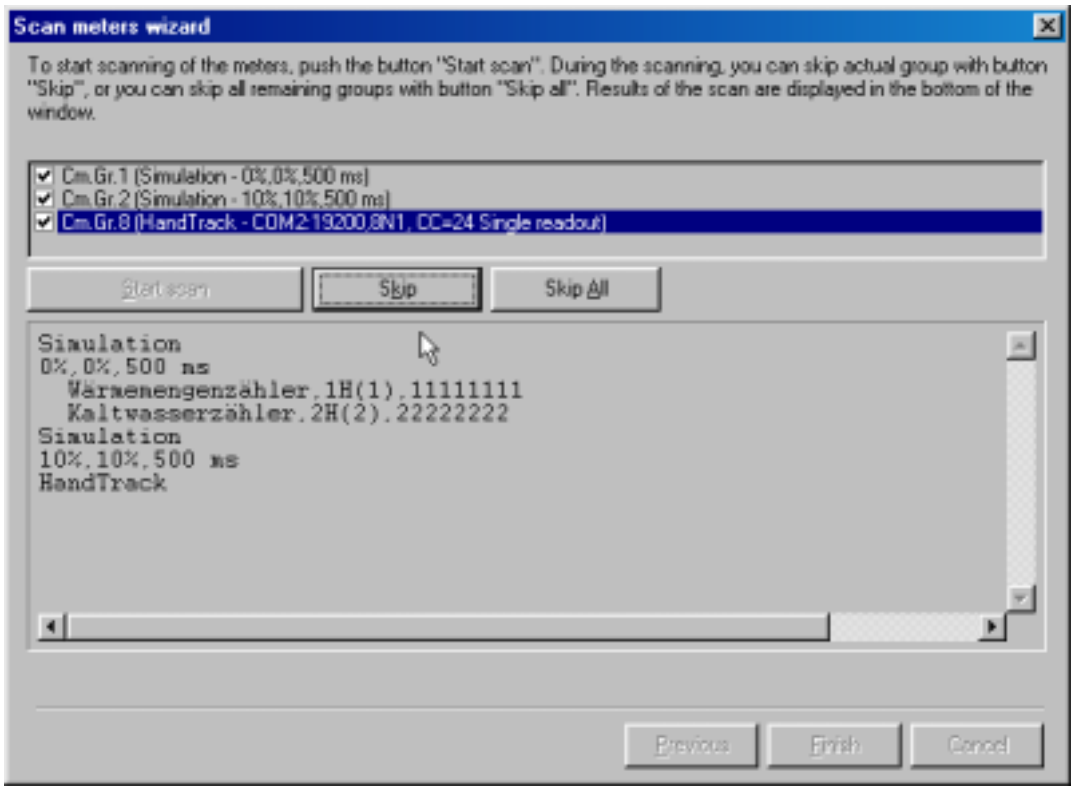

New station wizard
All meters in Dokom database are are linked to the channels and they are linked to the stations. Now you can add a new station and it's channels to prepare for adding the meters. Each station has it's unique name.
Enter the name of a new collecting station
station1
Channels will be addes
Groups will be added by wizard (recommended)
I will add them and setup them
Previous
Next
Cancel

Enter the desired name of the station. After clicking on the Next tab a new station is created. If you want to have the attached meters to be searched for automatically then use the assistant as depicted above.

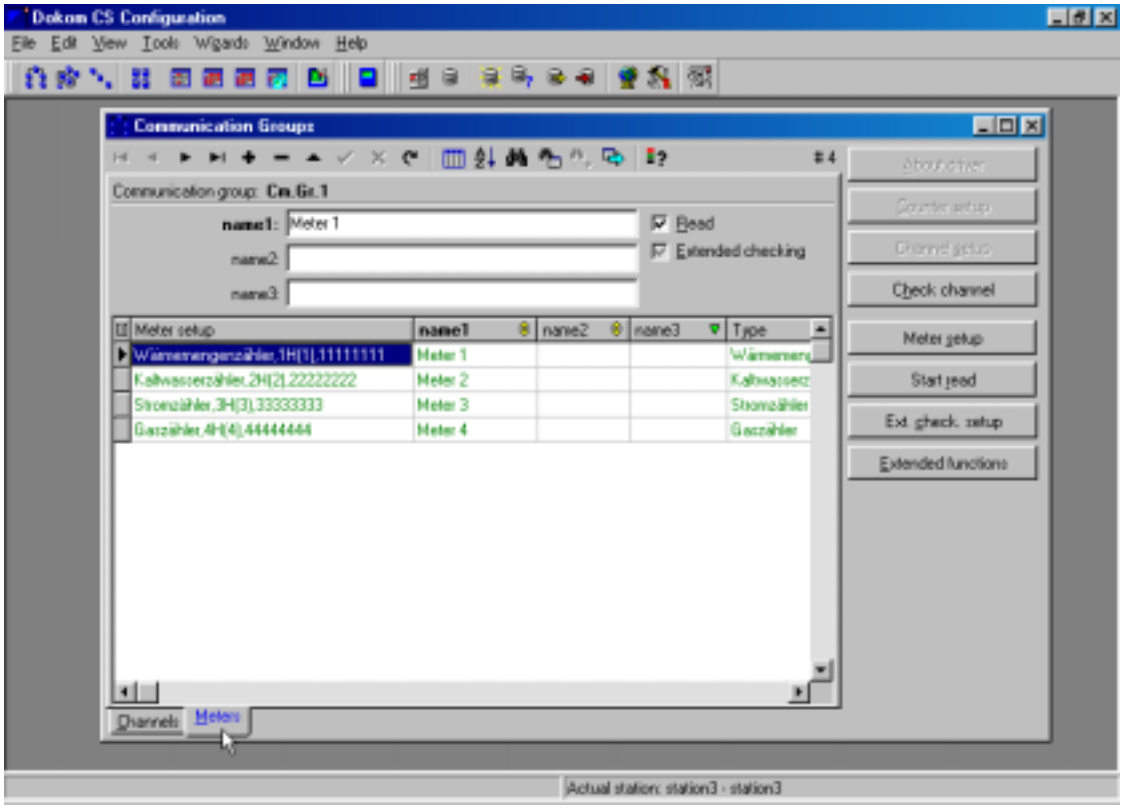
4.2 **Automatic Meter Search**


Scan meters wizard
Now you can see list of all channels. All checked groups will be scaned for the meters. You can select or unselect the groups which will be scaned by checking or unchecking them in the list.
Cm.Gr.1 (Simulation - 0%,0%,500 ms)
Cm.Gr.2 (Simulation - 10%,10%,500 ms)
Cm.Gr.3 (Serial-Mbus - COM1:2400, 8E1, Secondary scan)
Cm.Gr.4 (Serial-Mbus - COM1:300, 8E1, Primary scan)
Cm.Gr.5 (Serial-Mbus - COM2:2400, 8E1, Secondary scan)
Cm.Gr.6 (Serial-Mbus - COM2:300, 8E1, Primary scan)
Cm.Gr.7 (HandTrack - COM1:19200,8N1, CC=24 Single readout)
Cm.Gr.8 (HandTrack - COM2:19200,8N1, CC=24 Single readout)
Previous
Next
Cancel

Now select the necessary channels, in order to limit the meter search to the appropriate interfaces. If you are of the opinion that all the meters have been found, cancel the assistant to accelerate the process.

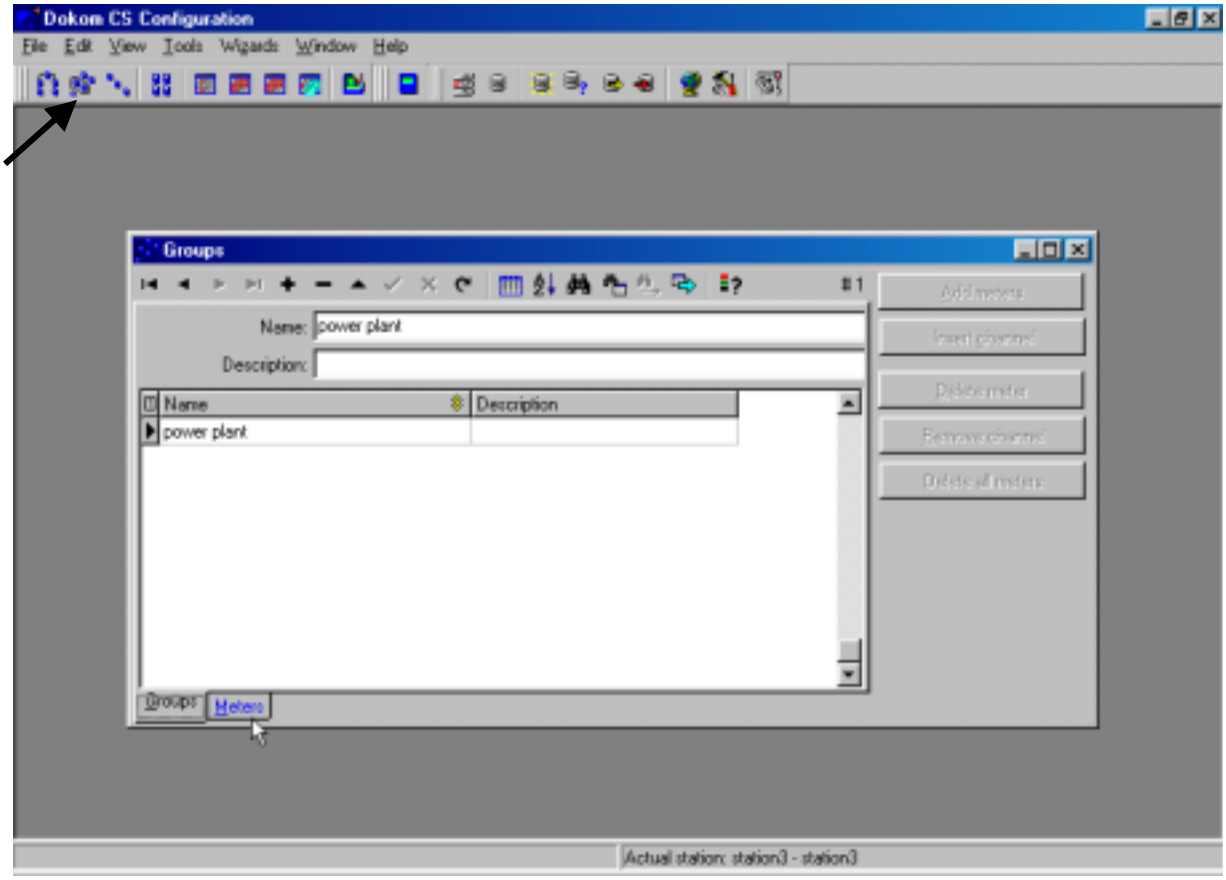

Scan meters wizard
To start scanning of the meters, push the button "Start scan". During the scanning, you can skip actual group with button "Skip", or you can skip all remaining groups with button "Skip all". Results of the scan are displayed in the bottom of the window.
Cm.Gr.1 (Simulation - 0%,0%,500 ms)
Cm.Gr.2 (Simulation - 10%,10%,500 ms)
Cm.Gr.8 (HandTrack - COM2:19200,8N1, CC=24 Single readout)
Start scan
Skip
Skip All
Simulation
0%,0%,500 ms
Wärmemengenzähler,1H(1),11111111
Kaltwasserzähler,2H(2),22222222
Simulation
10%,10%,500 ms
HandTrack
Previous
Finish
Cancel

The found meters are now added to the table. It is now possible to display the meters in the appropriate channels. Readout of an individual meter is possible by clicking Start in the meter window.



4.3 **Creating User Groups**

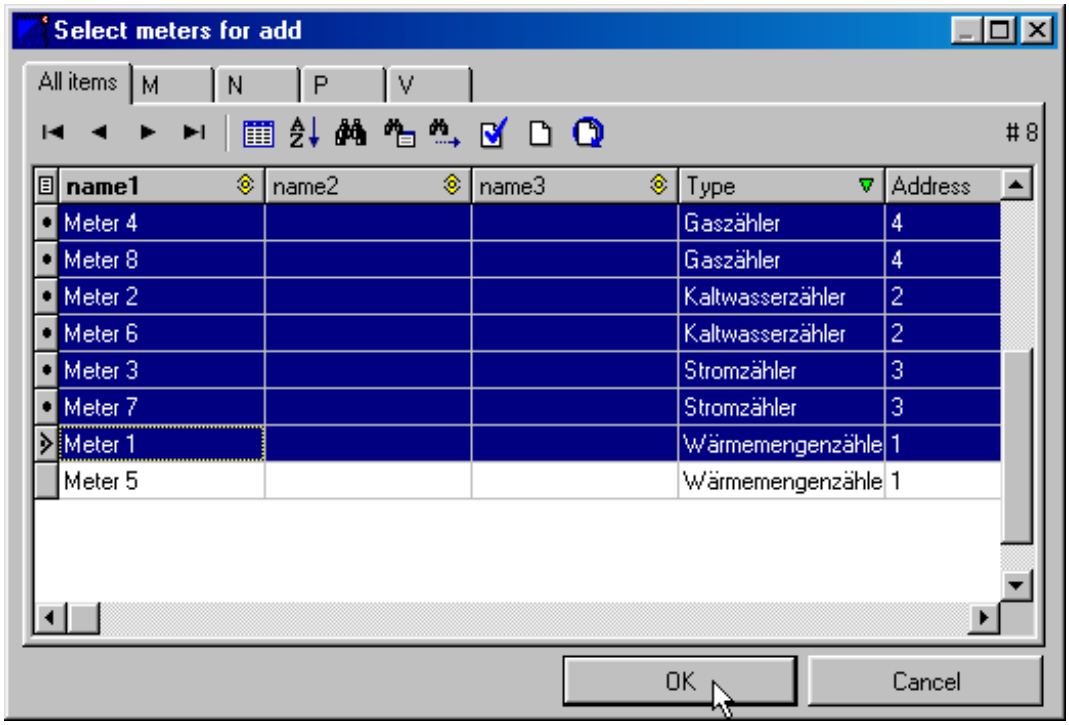
Meters that can be readout are now available in the meter list. Later, in order to enable a simple readout of the meters, a so-called User Group can be created, in which the desired meters can be added. If necessary read more about this in the introductory section. After clicking on *File* and then on *User Groups* or on the related symbol on the symbol list, the User Group window will open:



The user group can now be named. To this additional data can be entered e.g. place or position of the meters. After input of the text, the data will be acknowledged by clicking on the tick symbol.

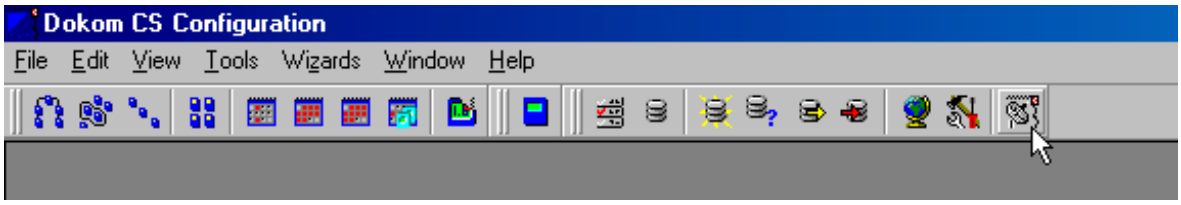
By pushing on the plus key a new entry can be added. By clicking on meters individual meters can be added. Adding all counters of a channel can be executed by clicking on Add Channel.

Below is the screen to add individual meters.



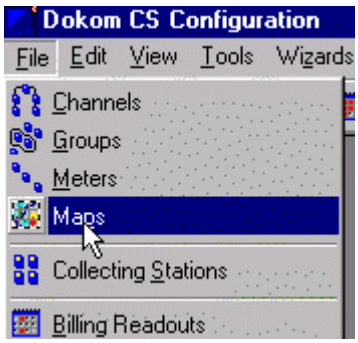
After the selection of the user groups one can change to Readout. By clicking on the satellite symbol DOKOM will start Reading.

Only if you need manual modification or different driver settings use the **manual setup from** the following chapter. Usually you will continue with the Chapter **Reading**.

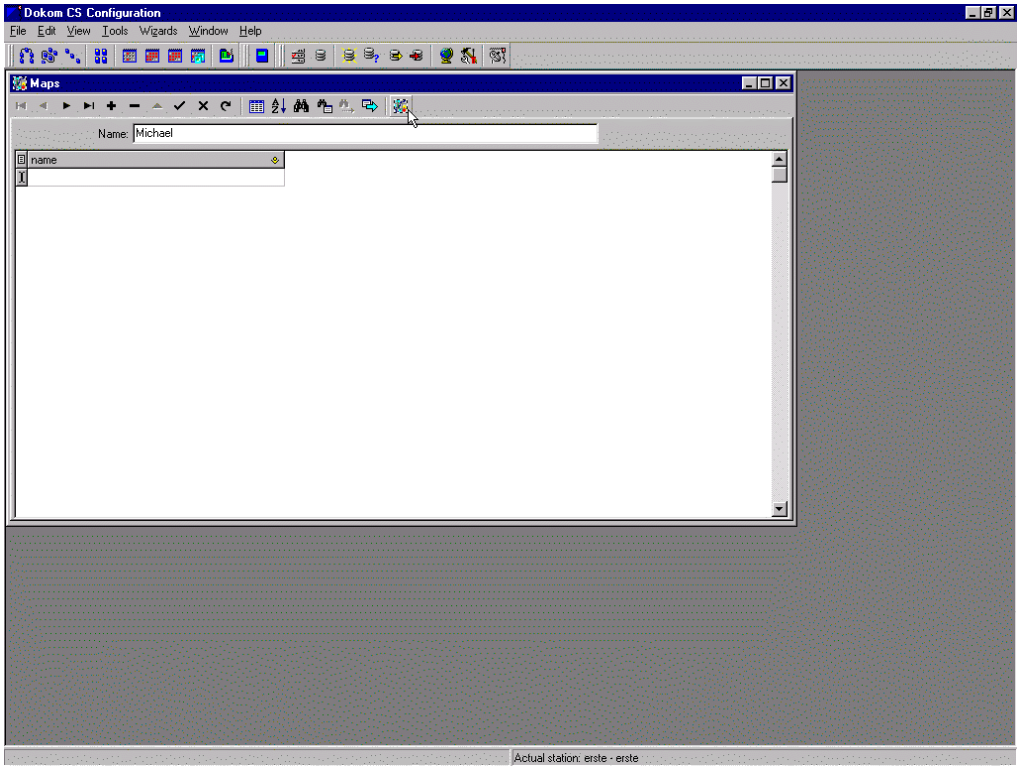


4.4 Using Maps

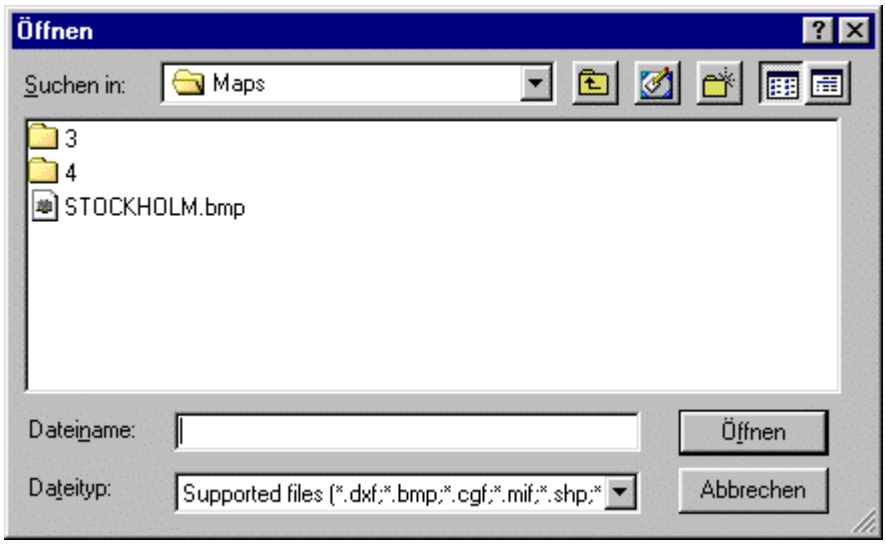
DOKOM CS enables the usage maps where the meters can be located. To use these integrated graphical application it is necessary to have a map of the location in an appropriated format e. g. BMP format.



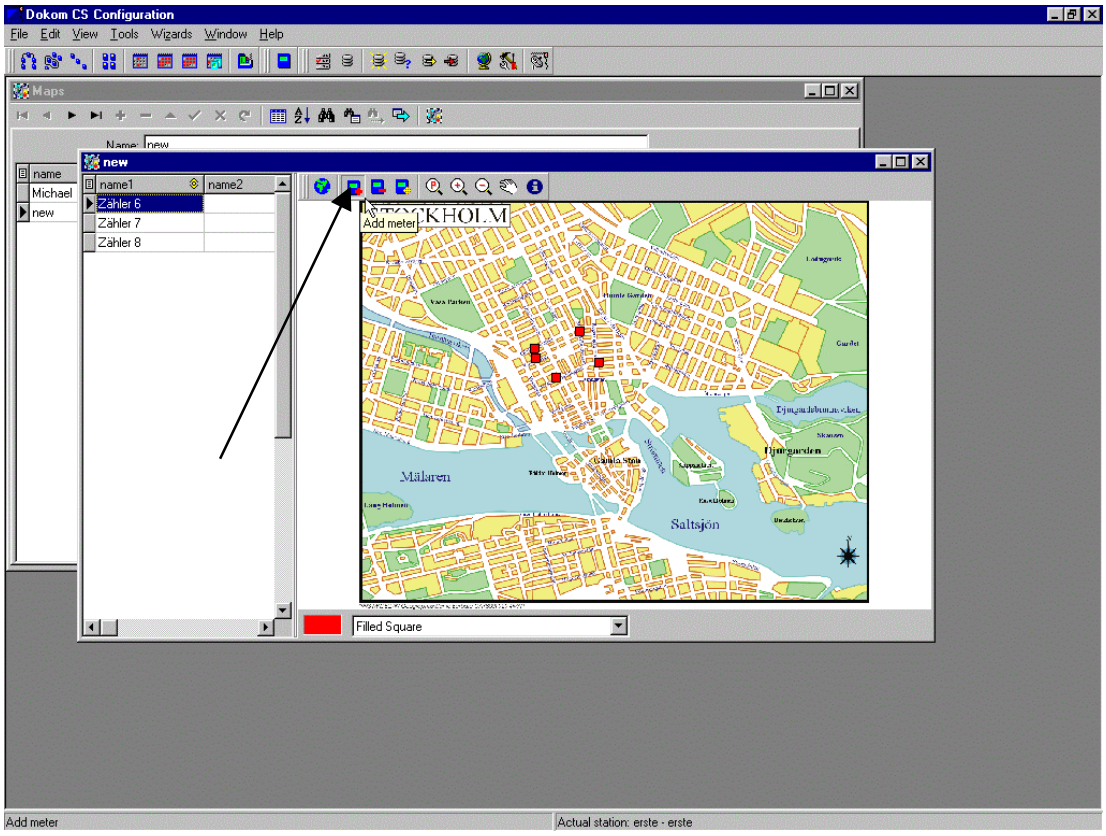
A new menu appears:



At first a new name is needed. Then you can select a map out of your files

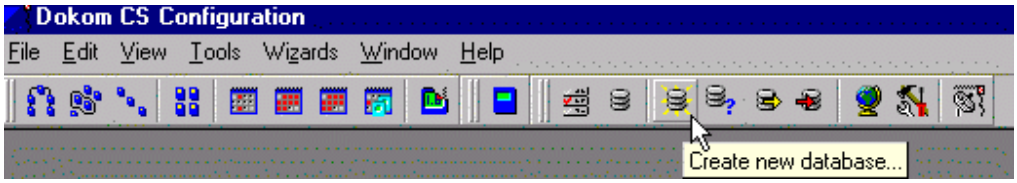


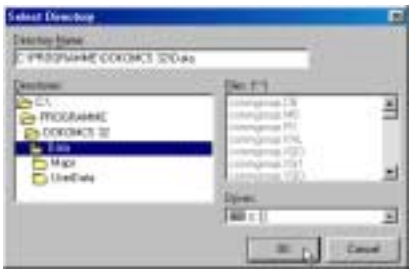
Opening the entry you add new meters to the map (see the arrow)



4.5 Manual Setup

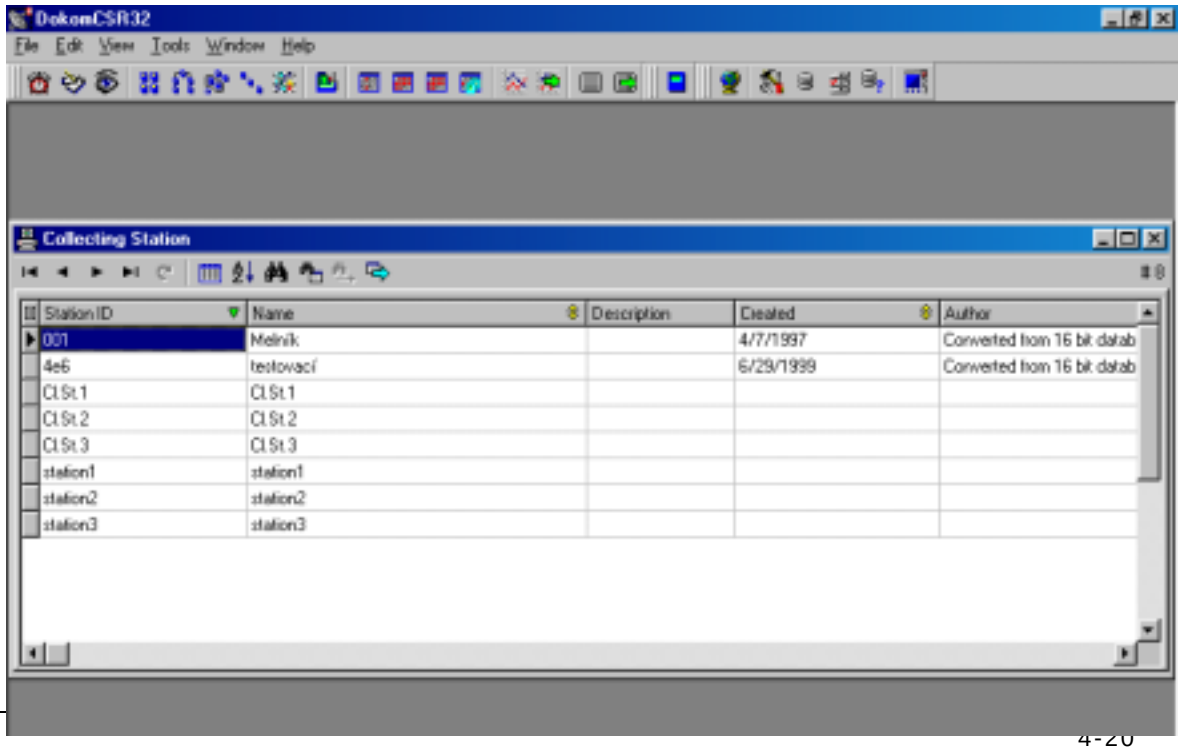
With individual installations, the assistant can create special directory structures or they can be implemented manually.





For basic configuration it is necessary to activate the database and stations. By clicking on Tools, Database Selection a new database is created. Select the appropriate directory, where the data base information is to be found. DOKOM can then access the data in the database.

After the database has been activated, a new station must be created. Under File, Station the Collection station window will open. Here the necessary data can be entered for the creation of the station. The – key deletes any entered data and the + key confirms and replaces any data.

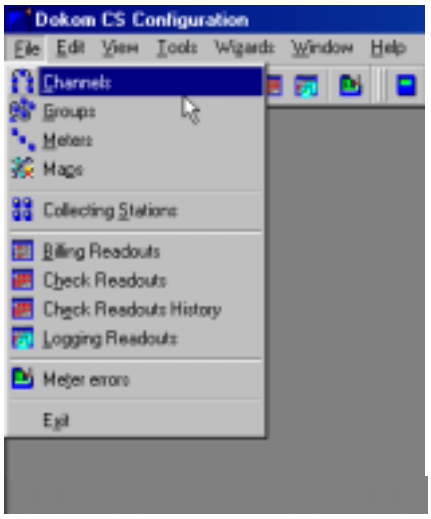

DokomCS32
File Edit View Tools Window Help
Collecting Station
Station ID | Name | Description | Created | Author
001 | Melnik | | 4/7/1997 | Converted from 16 bit datab
4e6 | testovací | | 6/29/1999 | Converted from 16 bit datab
CI.St.1 | CI.St.1
CI.St.2 | CI.St.2
CI.St.3 | CI.St.3
station1 | station1
station2 | station2
station3 | station3

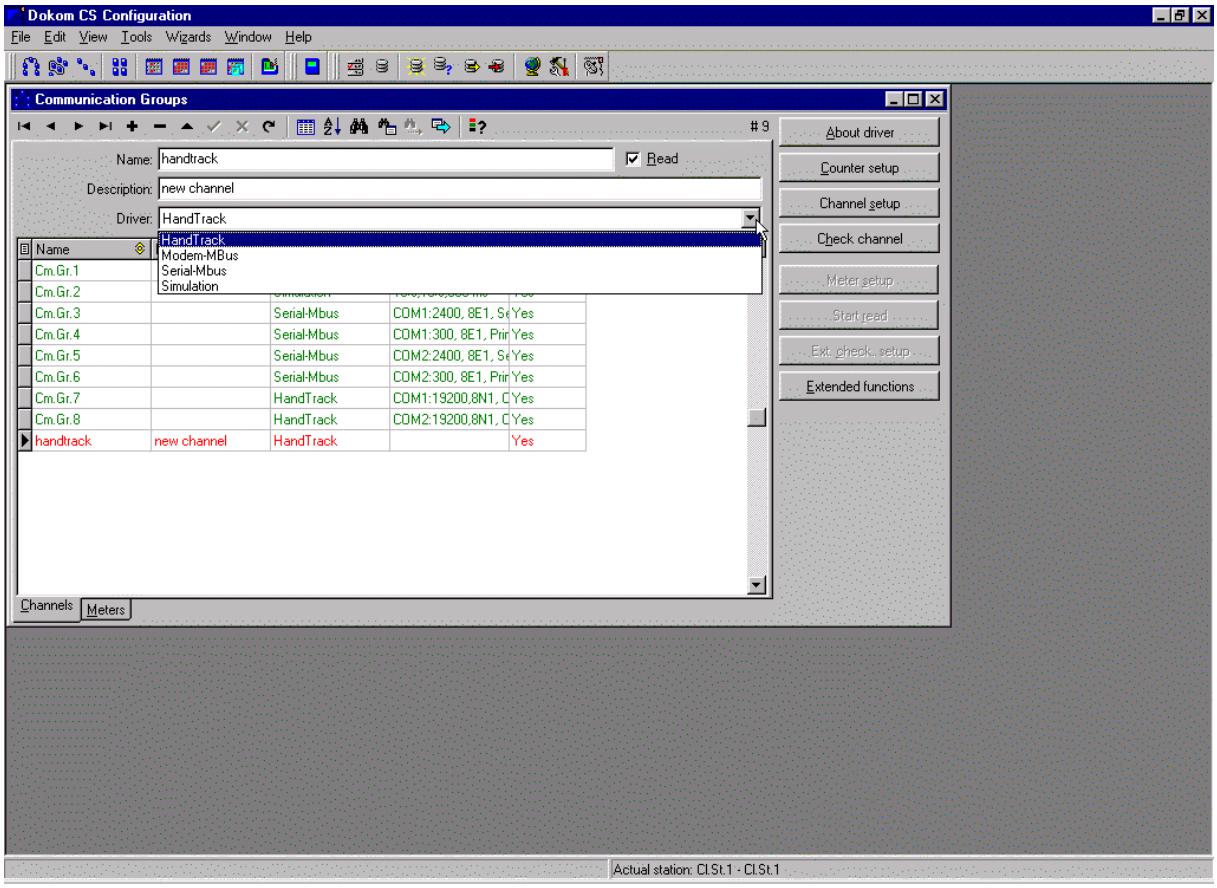
In the menu option *Tools*, *Select Station* the desired station can be chosen. By clicking on the station names and acknowledging this with the OK key the station is activated. The current station and database can now be tested by moving the mouse pointer to the appropriate symbol.

4.5.1 Setup of new Channels

With the help of channels the necessary data can be entered for the communication between DOKOM and the readout meters. There are some channels configured. It is possible to add more channels if the required are not available. Especially the readout through modem needs an individual channel and its setup. If the required channel is available it is not necessary to go through this chapter. Please use the scanning function to search for meters through that new channel.

Open the channel menu:





The Name, Description as well as the driver must be entered to create a new channel. After clicking on the arrow in the driver box various drivers will be displayed for selection, all drivers the available are displayed to the driver box. By clicking the - key the entered data is deleted, with the + key the data is added and saved.

In dependency of the desired driver the channel is activated as follows:

4.5.2 Simulation (Heat and Water meter)

With help of the simulation mode a readout can be realised without connecting a meter. For the readout result a counter value is generated within a certain range. To activate the channels the simulated rate of errors and the cyclic readout time must be entered. These values can be entered by selecting Options, Channel settings and entering the relevant information in the fields (see picture to the right). For ease of use the desired value can also be selected by pressing on the arrow symbol. The error rate should not be equal to 100%, otherwise no graph can be displayed. OK confirms the entered data (the

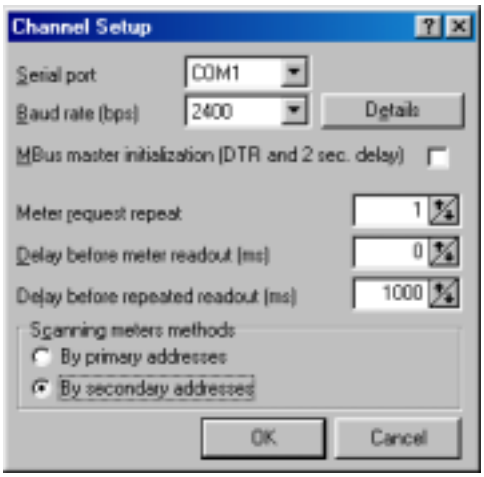
writing is green).

→ *The channel is now active (writing in green).*

4.5.3 RS232 (M-Bus)

This driver supports communication with a M-Bus-central. The central is connected with a serial cable to the PC. The menu option Settings Com. group contains the parameters for defining the Readout cycles and the time for the readout response. Behind the menu point configuration, the parameters can be set for serial communication. Parity, number of data bits etc. can be set there. OK confirms the entered parameters.

→ The channel is now active (writing is green).



4.5.4 Setup of the Meter

Meters can be generated and configured by clicking on the „Meters“ tab. The following window will open: generated. This opens the following window:

The descriptions of the 3 input fields appearing in the window can be changed under *Tools, Options*. Each counter is determined by input of these 3 points. By pressing the –key the entry is deleted and by pressing the +key the entry is confirmed.

The entries now appear in red writing in the table, i.e. the meters are still deactivated. The activation of the meters differs again in the programming of the driver for the channel.

4.5.4.1 Channel with Driver: Simulation (Heat and Water meter)

By pressing menu option *Meter settings* the window on the right will appear. For the simulation either a hot or cold water meter can be selected. Additionally each meter can be allocated an ID and a communication address. This makes a mix-up impossible during the representation of the values or in the on-line graphics. OK confirms the entered parameters.

→ The meter is now active (writing is green).

4.5.4.2 Channel with Driver: RS232 (M-Bus)

By pressing menu option *Meter settings* the window on the right will appear. The type of meter can now be selected. If several meters are installed on the Bus, then the respective MB addresses must be entered. The secondary address should only be activated, if more than 255 counters are attached to the Bus. OK confirms the entered parameters.

→ The meter is now active (writing is green).

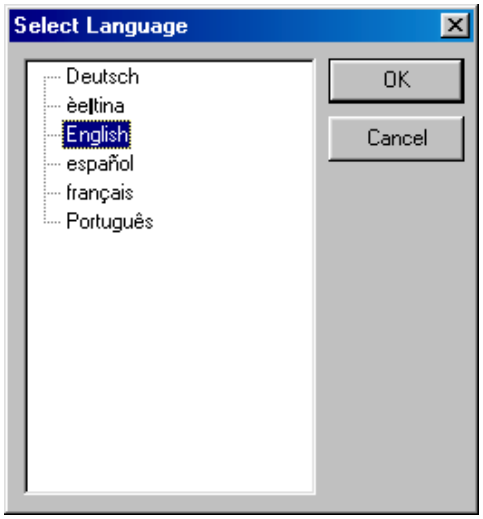
Now the channel is successfully configured with the relevant. By clicking the menu option Verify com. group this can be checked. If the examination should fail, check the last few steps.

4.5.5 Starting the Readout

Now a readout can be executed by clicking on the *Start the Readout* tab.

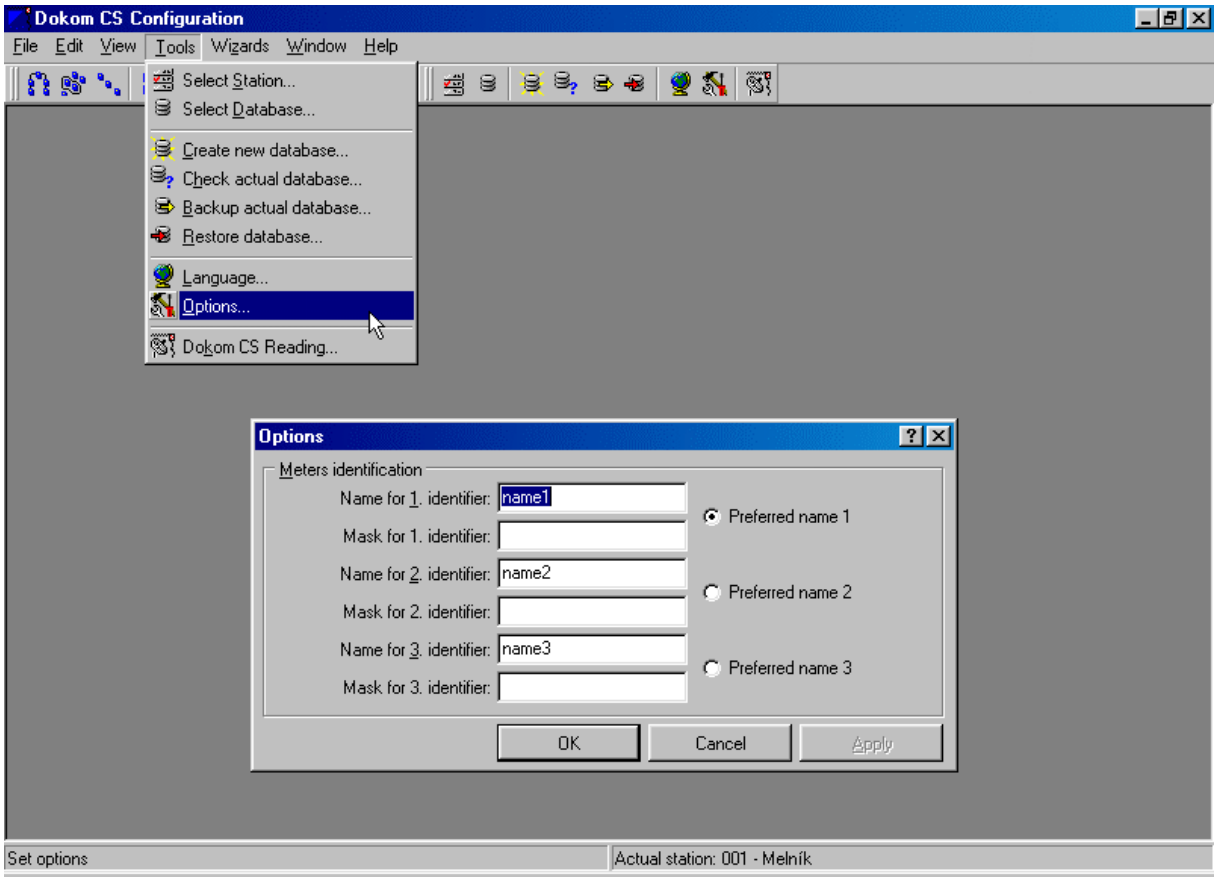
4.5.6 Language Selection

Behind the menu option Tools is the menu point Language. After clicking on the point, a window appears with the available languages.



4.5.7 Options

To change the name of the channel, go to menu options Tools, Options. A window will open in which the names can be changed.

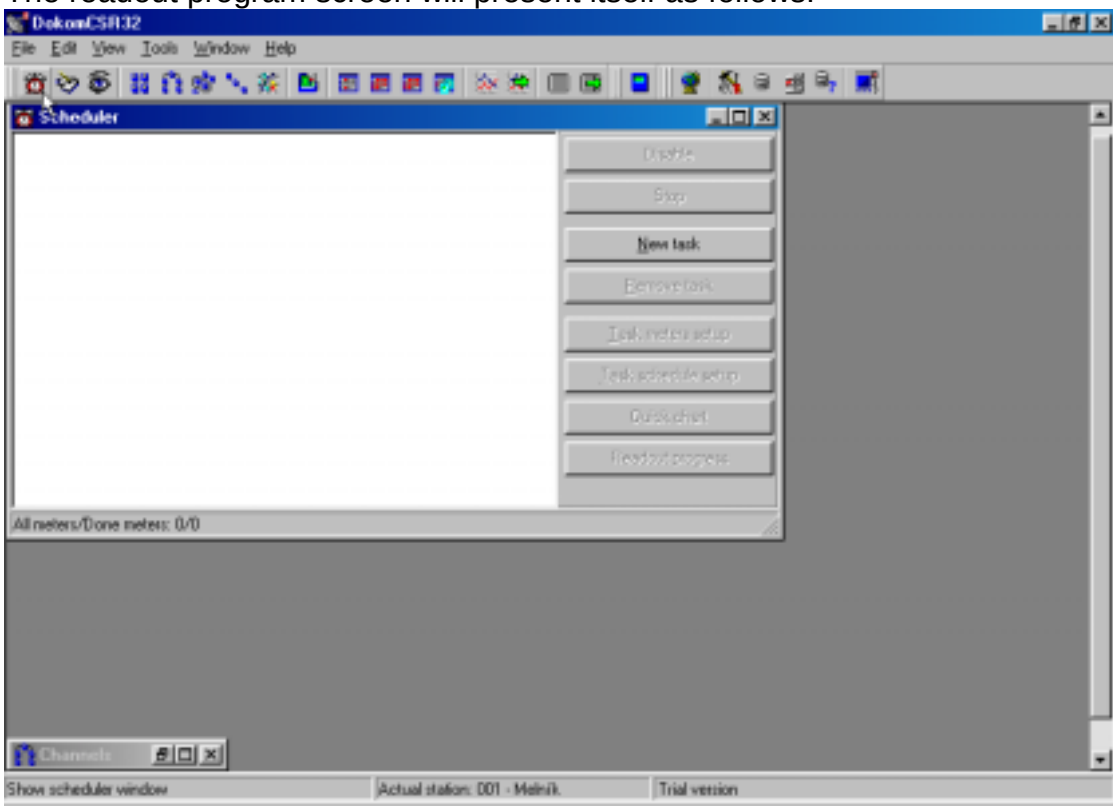

Dokom CS Configuration
File Edit View Tools Wizards Window Help
Select Station...
Select Database...
Create new database...
Check actual database...
Backup actual database...
Restore database...
Language...
Options...
Dokom CS Reading...
Options
Meters identification
Name for 1. identifier: name1
Mask for 1. identifier:
Preferred name 1
Name for 2. identifier: name2
Mask for 2. identifier:
Preferred name 2
Name for 3. identifier: name3
Mask for 3. identifier:
Preferred name 3
OK
Cancel
Apply
Set options
Actual station: 001 - Melník

5 READOUT

After completing configuration one can switch to the Readout program:

5.1 Scheduler

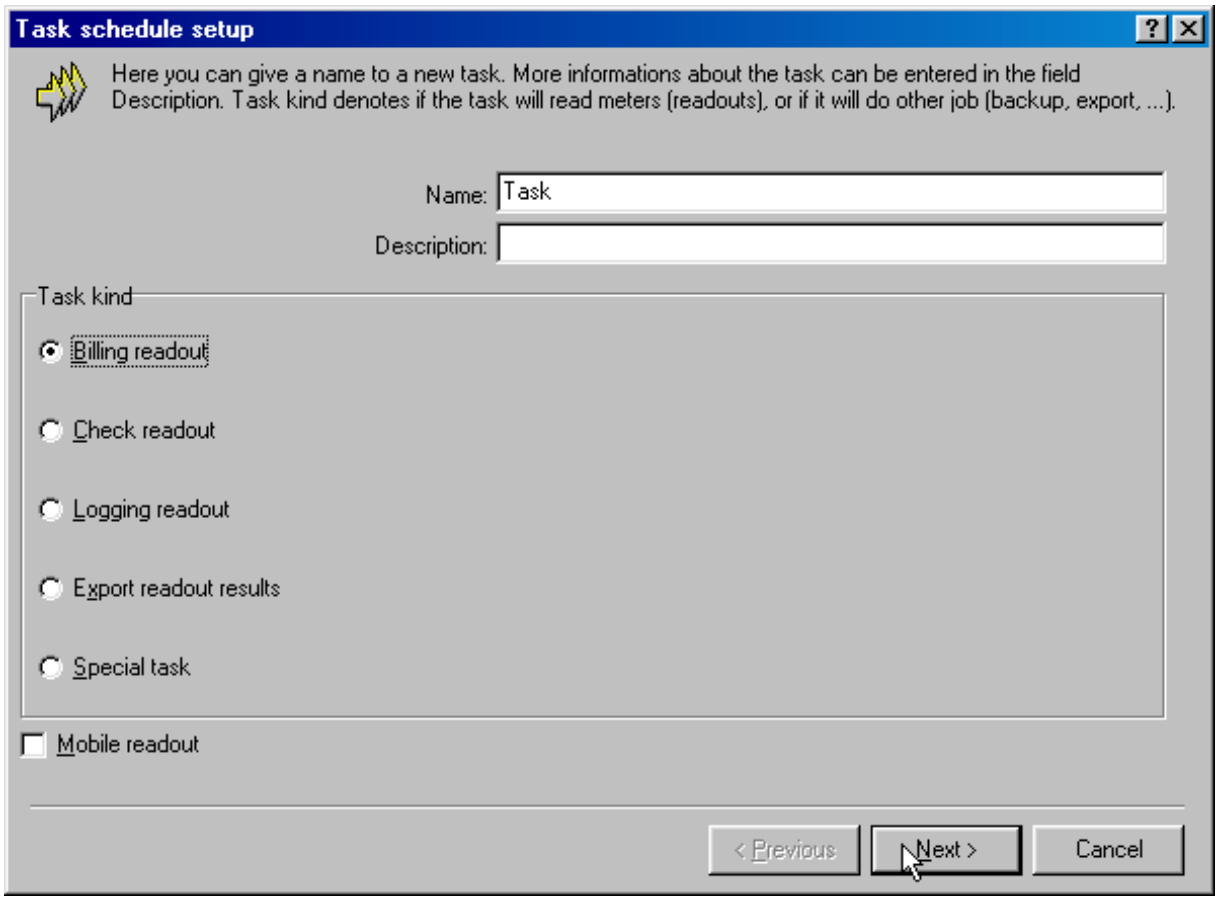
The readout program screen will present itself as follows:



By clicking on the clock symbol the option to enter readout procedures within the scheduler will appear. It is possible to pre-set readouts so that DOKOM runs these automatically. Several readout procedures can be entered so that these are later run simultaneously.

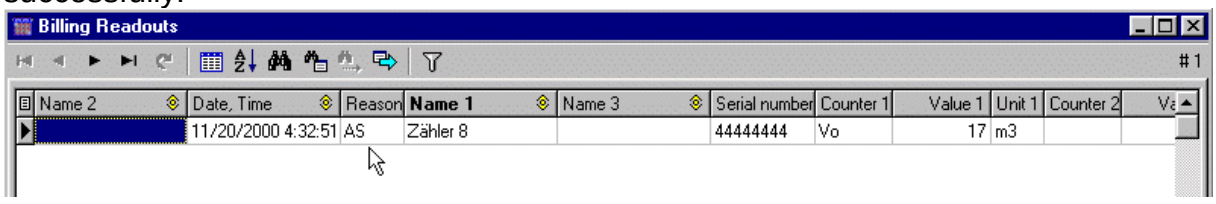
5.2 Procedure Types

Different procedures, which are independent of each other from each other, can be entered:

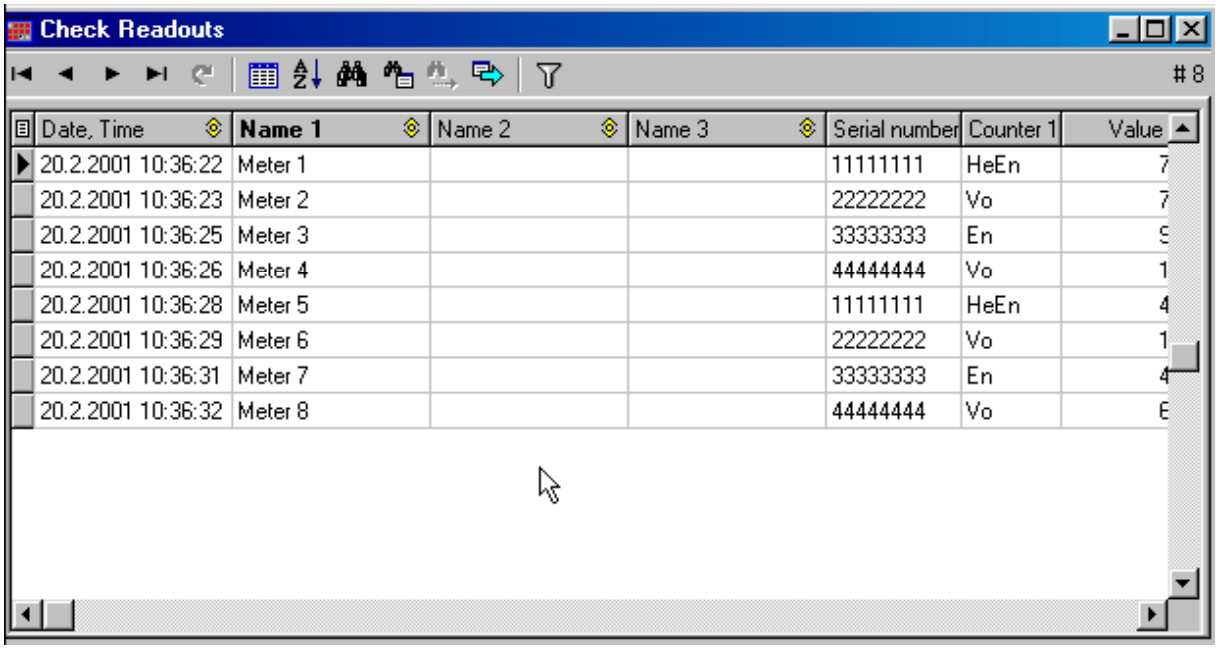

Task schedule setup
Here you can give a name to a new task. More informations about the task can be entered in the field Description. Task kind denotes if the task will read meters (readouts), or if it will do other job (backup, export, ...).
Name: Task
Description:
Task kind
Billing readout
Check readout
Logging readout
Export readout results
Special task
Mobile readout
< Previous
Next >
Cancel

5.2.1 Readout for Billing

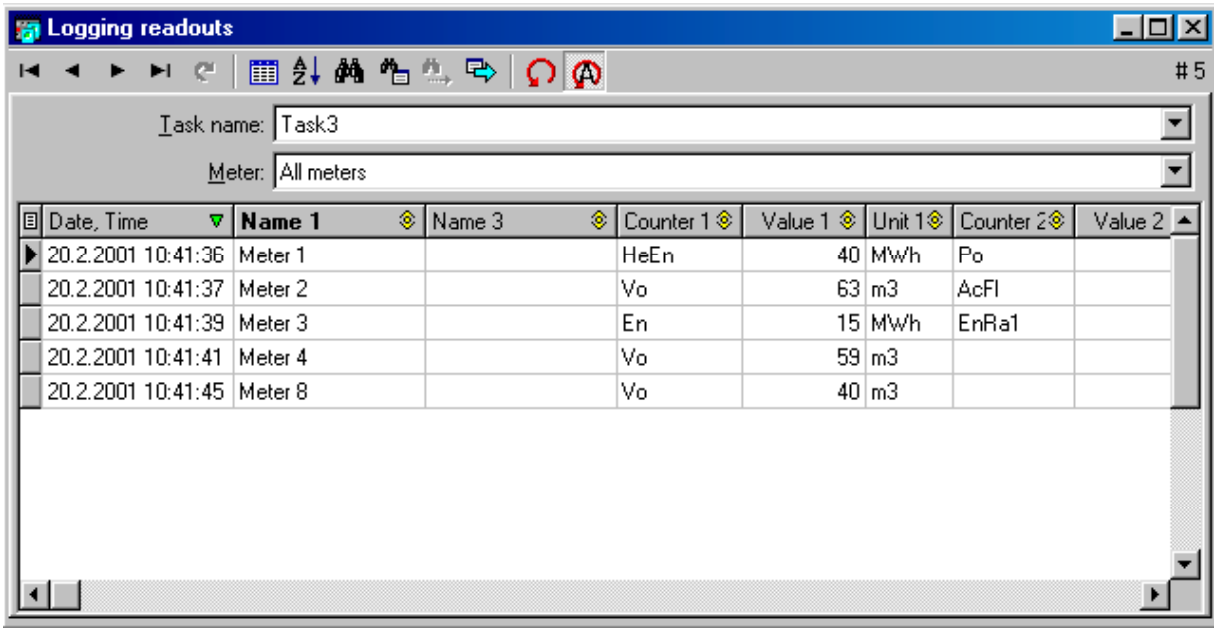
By this it is understood that meters are to be read periodically to produce an account. This type of the reading takes priority so that in the event of two readout procedures conflicting on a meter, the readout is carried out successfully.



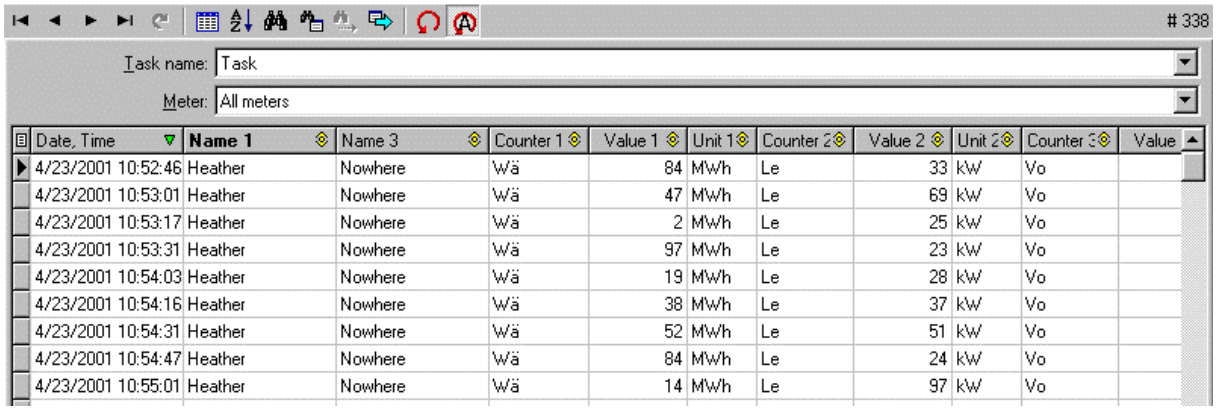
5.2.2 Readout for Verifying



5.2.3 Logging Readout


Logging readouts
#5
Task name: Task3
Meter: All meters
Date, Time | Name 1 | Name 3 | Counter 1 | Value 1 | Unit 1 | Counter 2 | Value 2
20.2.2001 10:41:36 | Meter 1 | | HeEn | 40 | MWh | Po |
20.2.2001 10:41:37 | Meter 2 | | Vo | 63 | m3 | AcFl |
20.2.2001 10:41:39 | Meter 3 | | En | 15 | MWh | EnRa1 |
20.2.2001 10:41:41 | Meter 4 | | Vo | 59 | m3 | |
20.2.2001 10:41:45 | Meter 8 | | Vo | 40 | m3 | |

5.2.4 Readout for Export

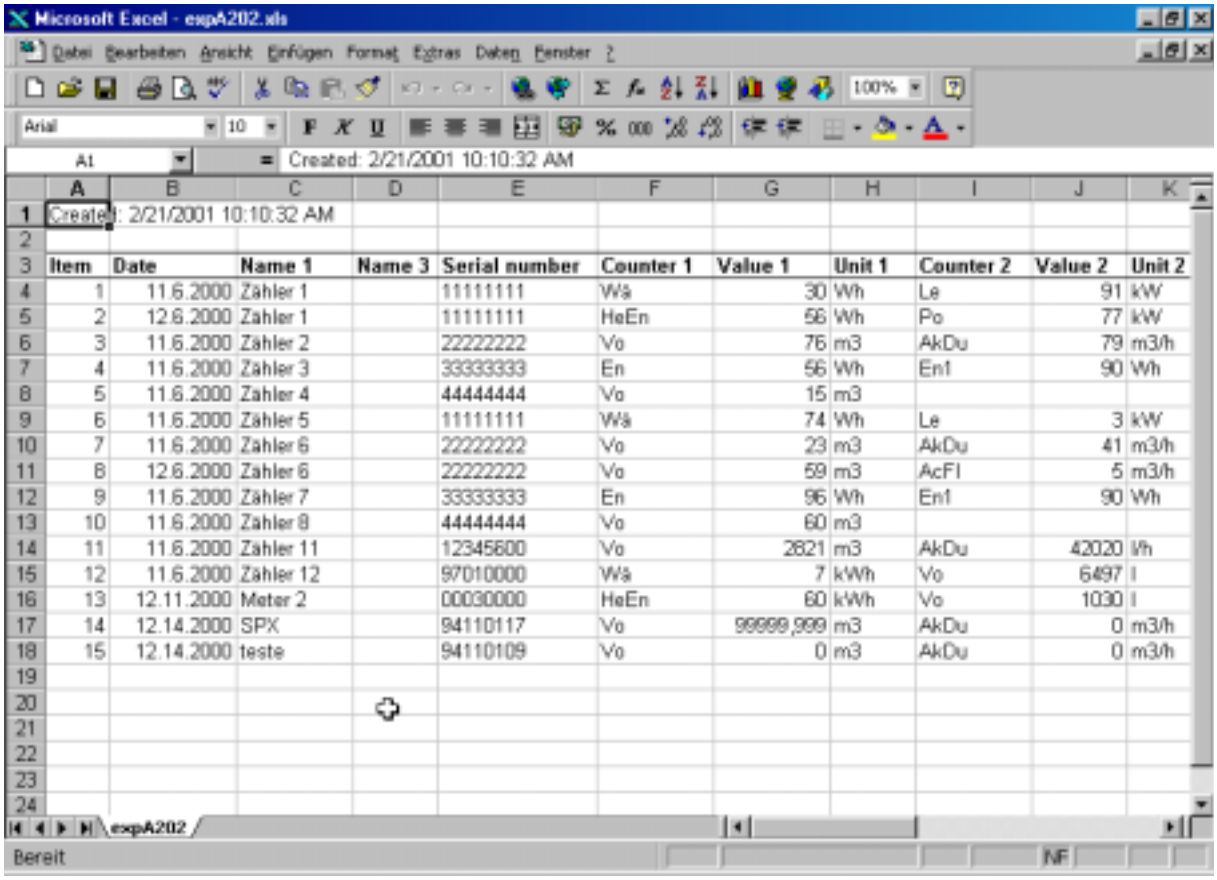


Task name: Task

Meter: All meters

338

Date, Time	Name 1	Name 3	Counter 1	Value 1	Unit 1	Counter 2	Value 2	Unit 2	Counter 3	Value
4/23/2001 10:52:46	Heather	Nowhere	Wä	84	MWh	Le	33	kW	Vo	
4/23/2001 10:53:01	Heather	Nowhere	Wä	47	MWh	Le	69	kW	Vo	
4/23/2001 10:53:17	Heather	Nowhere	Wä	2	MWh	Le	25	kW	Vo	
4/23/2001 10:53:31	Heather	Nowhere	Wä	97	MWh	Le	23	kW	Vo	
4/23/2001 10:54:03	Heather	Nowhere	Wä	19	MWh	Le	28	kW	Vo	
4/23/2001 10:54:16	Heather	Nowhere	Wä	38	MWh	Le	37	kW	Vo	
4/23/2001 10:54:31	Heather	Nowhere	Wä	52	MWh	Le	51	kW	Vo	
4/23/2001 10:54:47	Heather	Nowhere	Wä	84	MWh	Le	24	kW	Vo	
4/23/2001 10:55:01	Heather	Nowhere	Wä	14	MWh	Le	97	kW	Vo	



Microsoft Excel - expA202.xls

Datei Bearbeiten Ansicht Einfügen Format Extras Daten Fenster ?

Arial 10 100%

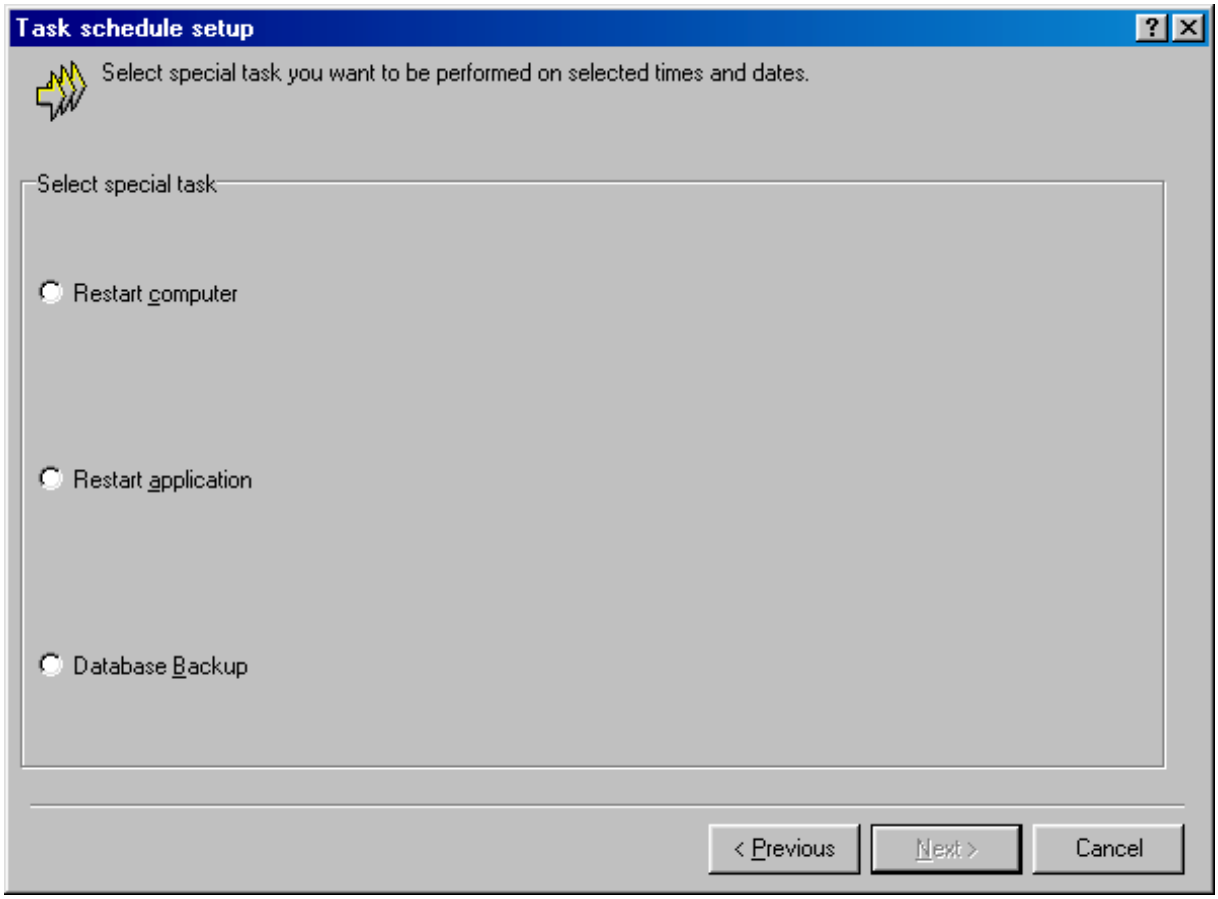
A1 = Created: 2/21/2001 10:10:32 AM

	A	B	C	D	E	F	G	H	I	J	K
1	Created: 2/21/2001 10:10:32 AM										
2											
3	Item	Date	Name 1	Name 3	Serial number	Counter 1	Value 1	Unit 1	Counter 2	Value 2	Unit 2
4	1	11.6.2000	Zähler 1		11111111	Wä	30	Wh	Le	91	kW
5	2	12.6.2000	Zähler 1		11111111	HeEn	56	Wh	Po	77	kW
6	3	11.6.2000	Zähler 2		22222222	Vo	76	m3	AkDu	79	m3/h
7	4	11.6.2000	Zähler 3		33333333	En	56	Wh	En1	90	Wh
8	5	11.6.2000	Zähler 4		44444444	Vo	15	m3			
9	6	11.6.2000	Zähler 5		11111111	Wä	74	Wh	Le	3	kW
10	7	11.6.2000	Zähler 6		22222222	Vo	23	m3	AkDu	41	m3/h
11	8	12.6.2000	Zähler 6		22222222	Vo	59	m3	AcFl	5	m3/h
12	9	11.6.2000	Zähler 7		33333333	En	96	Wh	En1	90	Wh
13	10	11.6.2000	Zähler 8		44444444	Vo	60	m3			
14	11	11.6.2000	Zähler 11		12345600	Vo	2821	m3	AkDu	42020	l/h
15	12	11.6.2000	Zähler 12		97010000	Wä	7	kWh	Vo	6497	l
16	13	12.11.2000	Meter 2		00030000	HeEn	60	kWh	Vo	1030	l
17	14	12.14.2000	SPX		94110117	Vo	99999,999	m3	AkDu	0	m3/h
18	15	12.14.2000	teste		94110109	Vo	0	m3	AkDu	0	m3/h
19											
20											
21											
22											
23											
24											

expA202

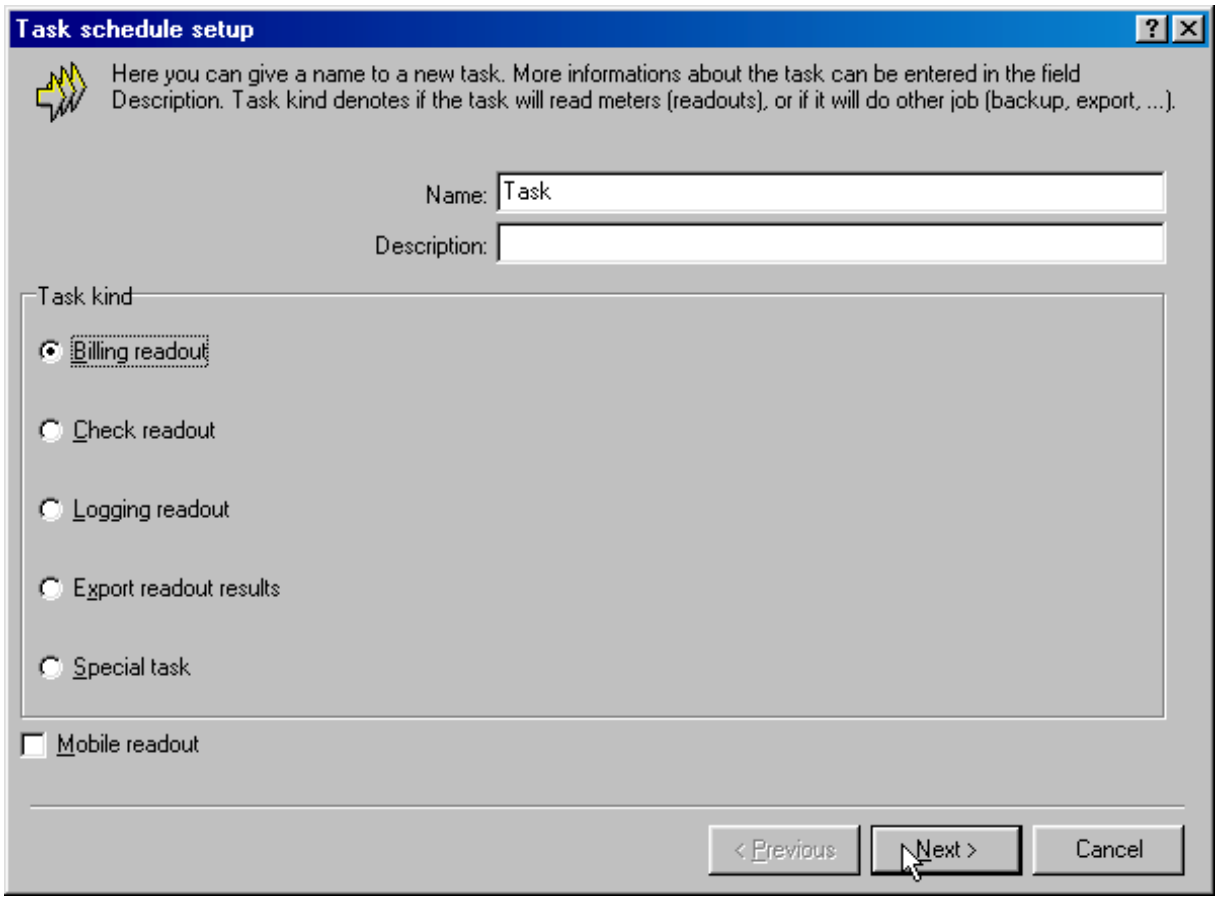
Bereit NF

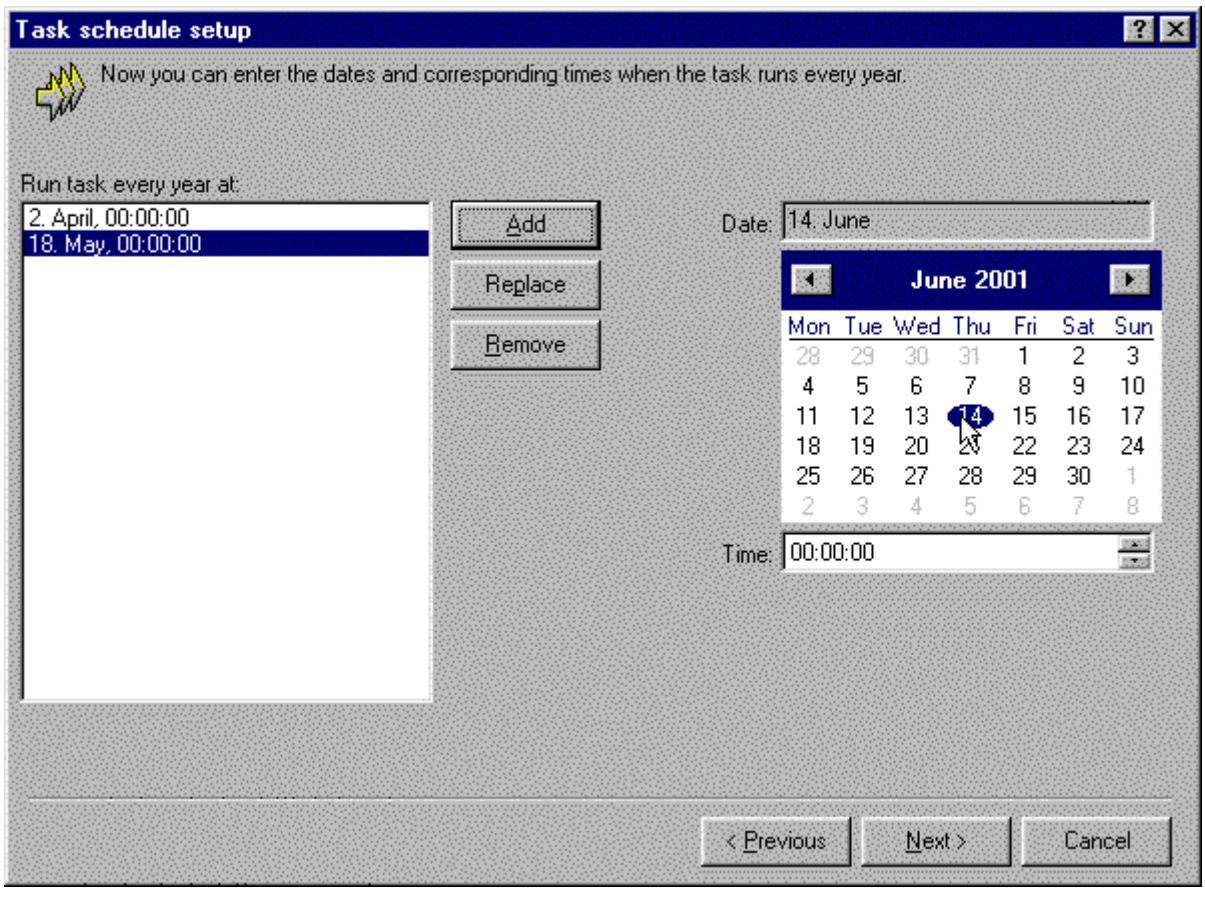
5.2.5 Special Procedures



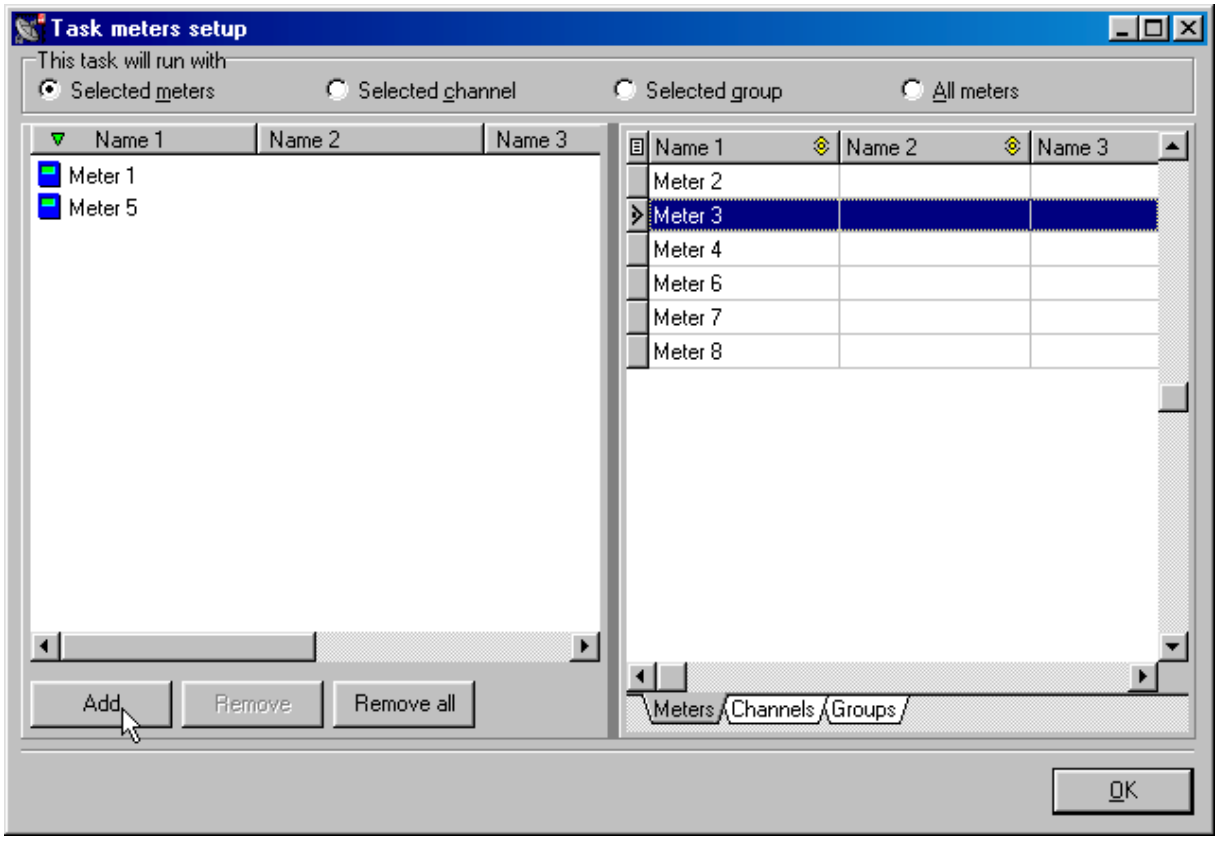
5.2.6 Mobile Readout

5.3 Procedure Replication


Task schedule setup
Here you can give a name to a new task. More informations about the task can be entered in the field Description. Task kind denotes if the task will read meters (readouts), or if it will do other job (backup, export, ...).
Name: Task
Description:
Task kind
Billing readout
Check readout
Logging readout
Export readout results
Special task
Mobile readout
< Previous
Next >
Cancel


Task schedule setup
Now you can enter the dates and corresponding times when the task runs every year.
Run task every year at:
2. April, 00:00:00
18. May, 00:00:00
Add
Replace
Remove
Date: 14. June
June 2001
Mon Tue Wed Thu Fri Sat Sun
28 29 30 31 1 2 3
4 5 6 7 8 9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30 1
2 3 4 5 6 7 8
Time: 00:00:00
< Previous
Next >
Cancel

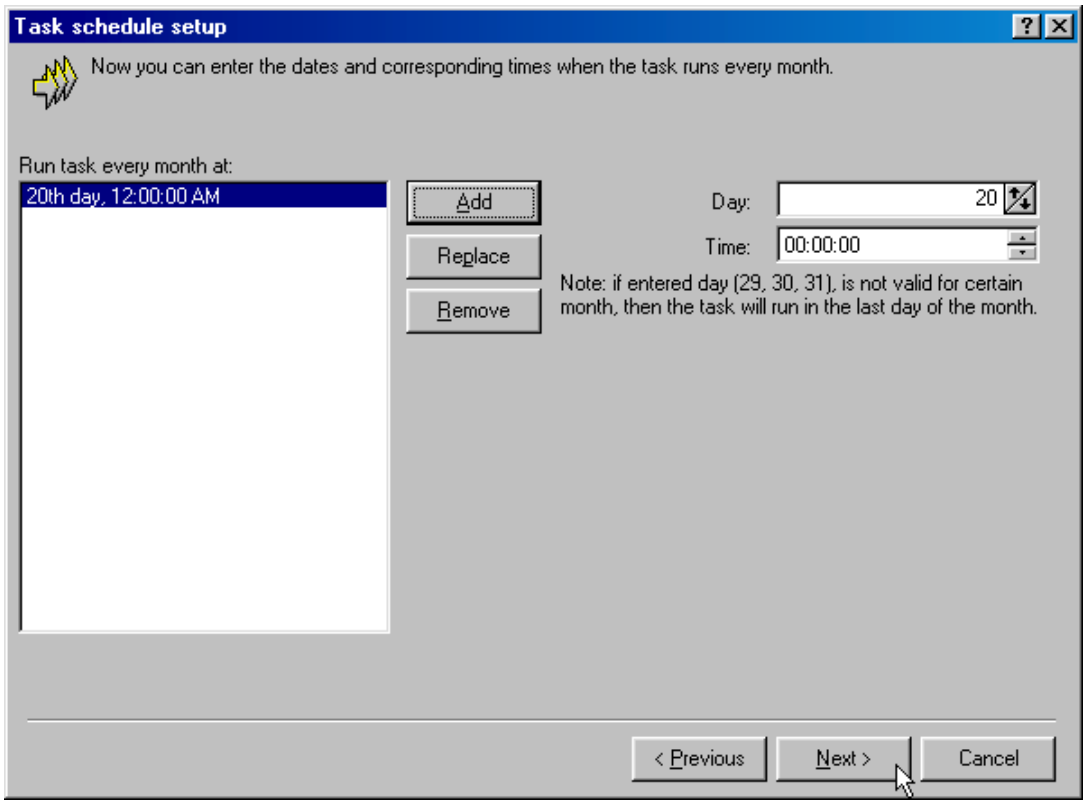
More than one readout can be set which are then executed annually. For example, DOKOM can read the meter on the 2nd of April and also on the 18th of May. It is important that in these cases the readout of the set dates only takes place on the specific dates that were set.



5.3.1 Monthly Readout

The same criteria apply the to the monthly readout as the yearly readout. An intermediate reading can also be implemented here e.g. on the 15th of a month.

Frequently the question arises what is to be set if the readout is to take place on the last day of the month. As it is know the months are different from one another. DOKOM is able to interrogate its calendar so that if the date is entered as the 31st of April it will automatically read the meter on the 30th.

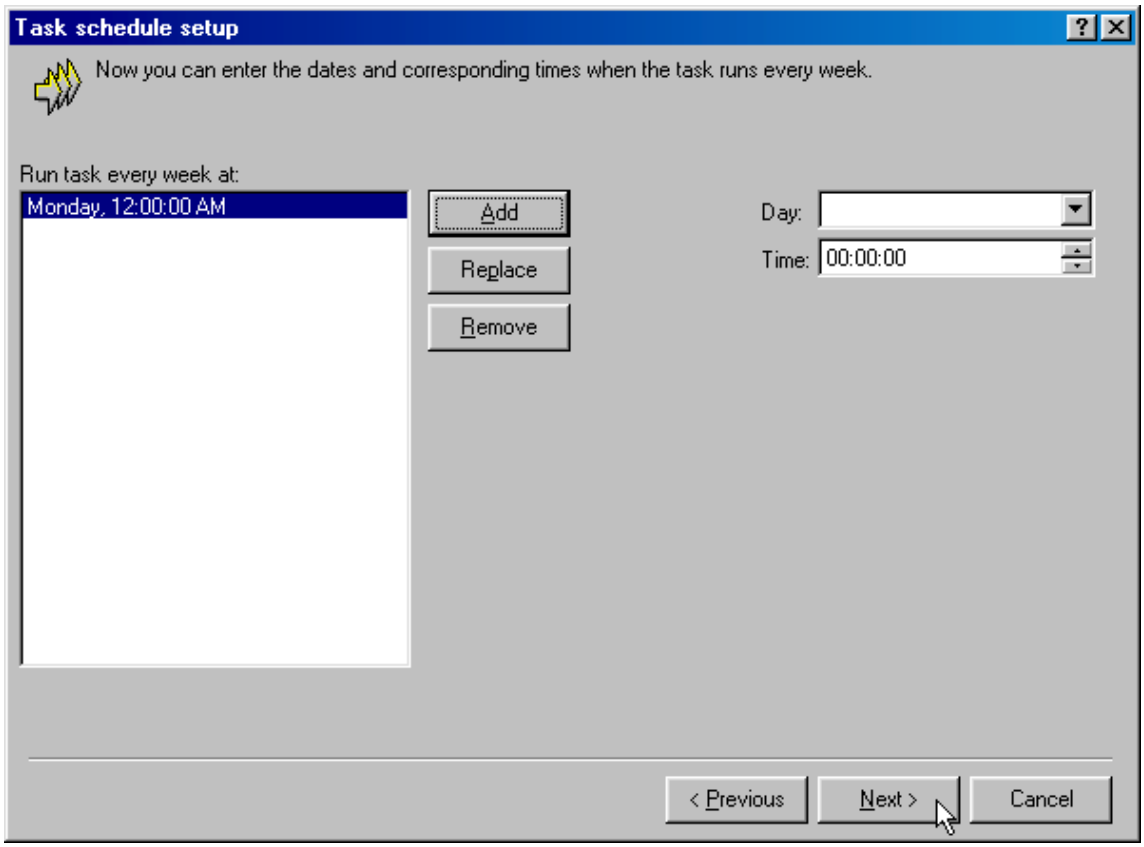

Task schedule setup
Now you can enter the dates and corresponding times when the task runs every month.
Run task every month at:
20th day, 12:00:00 AM
Add
Replace
Remove
Day:
20
Time:
00:00:00
Note: if entered day (29, 30, 31), is not valid for certain month, then the task will run in the last day of the month.
< Previous
Next >
Cancel

5.3.2 Weekly Readout

With the weekly reading the readout day and the time can freely be chosen. As with the other readings it is possible to have several readouts on different weekdays. This can be useful e.g. when weekend consumption is to be dealt with separately.

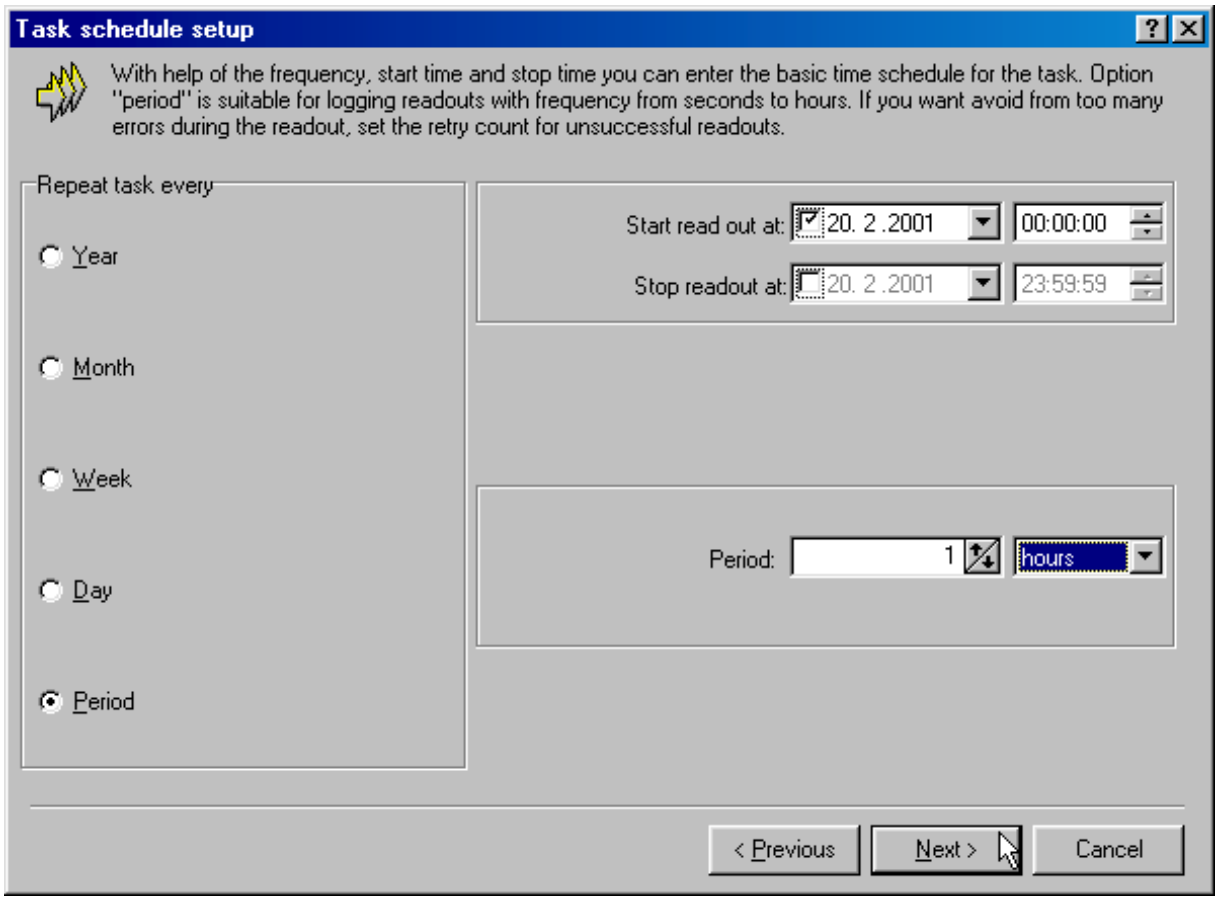
5.3.3 Daily Readout

The same applies here as with the other readout methods. Several readouts can also be set.



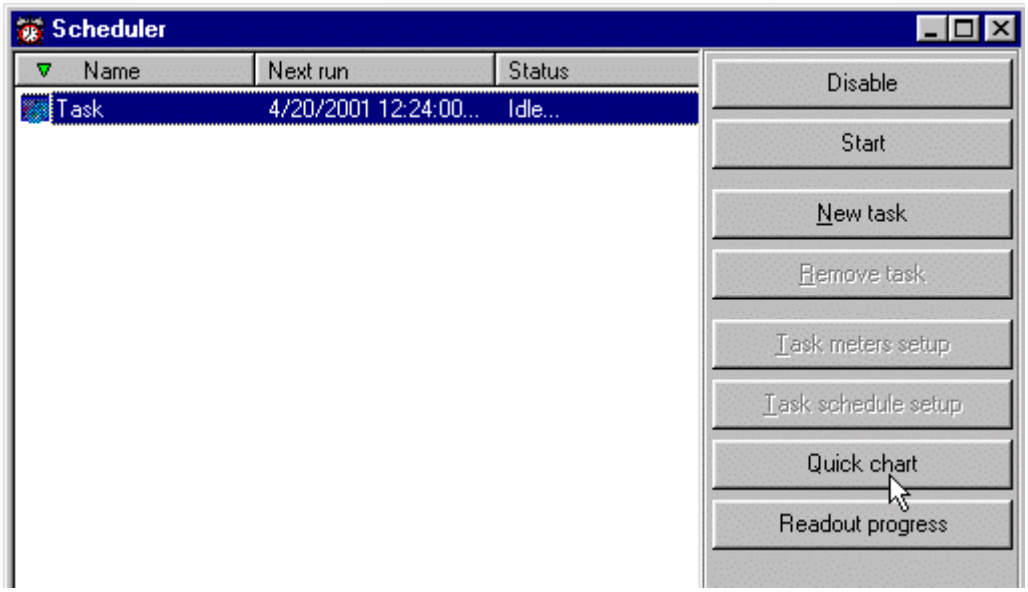
5.3.4 Periodic Readings

With periodic readings the intervals between readings is set. This type of the readout is particularly suitable for the user readouts, if for example for inspection purposes individual meters are to be readout very frequently for detailed investigation e.g. every 5 minutes (Logger mode).


Task schedule setup
With help of the frequency, start time and stop time you can enter the basic time schedule for the task. Option "period" is suitable for logging readouts with frequency from seconds to hours. If you want avoid from too many errors during the readout, set the retry count for unsuccessful readouts.
Repeat task every
Year
Month
Week
Day
Period
Start read out at:
20. 2 .2001
00:00:00
Stop readout at:
20. 2 .2001
23:59:59
Period:
1
hours
< Previous
Next >
Cancel

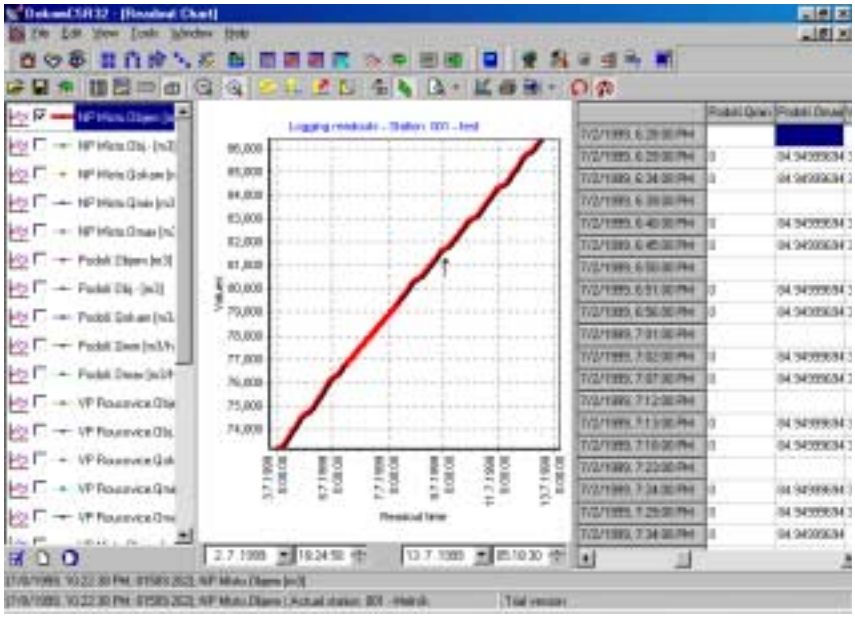
5.4 Online-Graphics

One of the special features of DOKOM is the possibility to display readouts instantly in a graphical format. In addition the appropriate function is available in the procedure scheduler. The appropriate readout procedure is marked. Afterwards the „Quick chart“ key is enabled. The key is also enabled when the readout is cancelled. However, the current readout procedure is then cancelled.

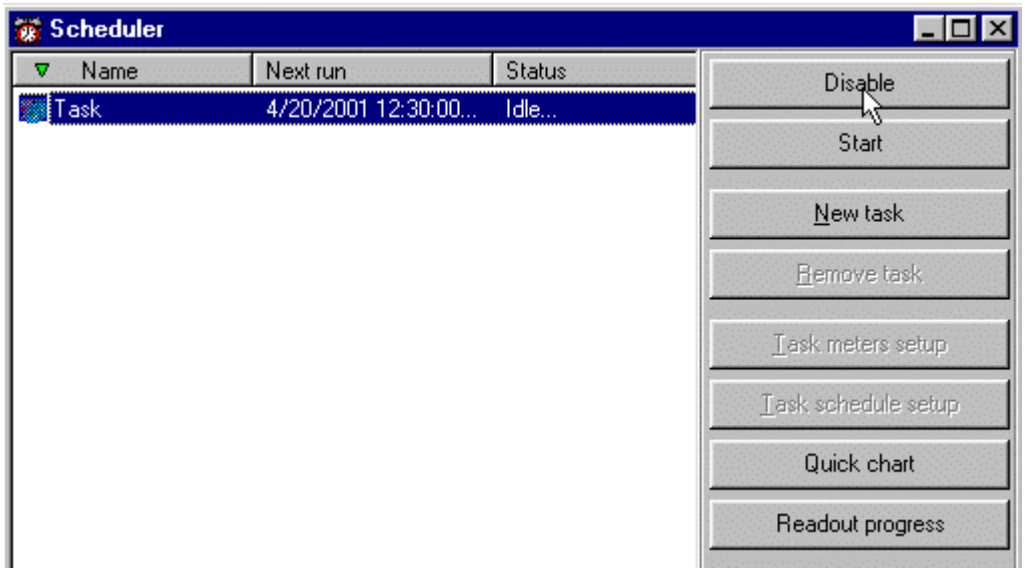


After the “Quick chart” key is pressed, the graphical representation of all the meters within the readout procedure are shown.

The tab must be pressed so that the graphics are constantly actualised.



5.5 Changing of Readout Procedures



In order to change a running readout procedure it is necessary to select the applicable to select it in the readout planer. The readout procedure will then be stopped.

Thereafter the meter setup can be changed with “Task Meter Setup”

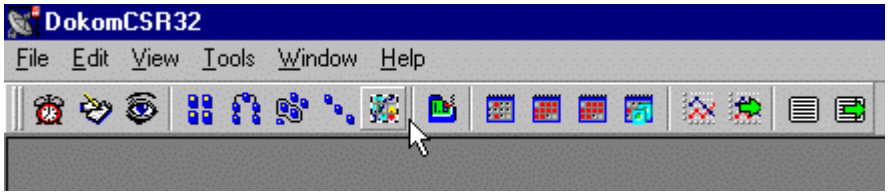
Under “Task schedule Setup” the parameters of the procedure can be changed.

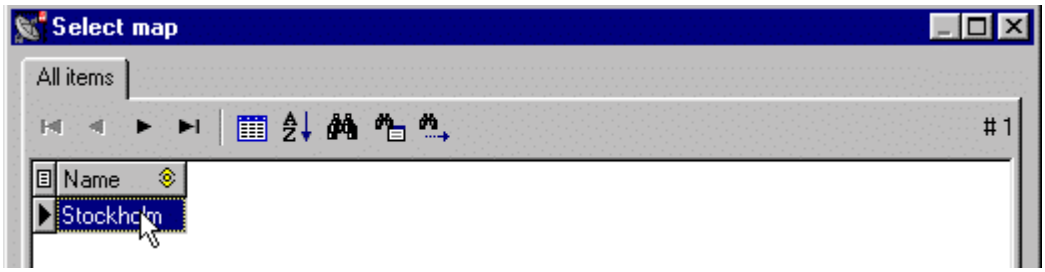
To activate the procedure once again the “Enable/Disable” button must be pressed and change to “Enable”.

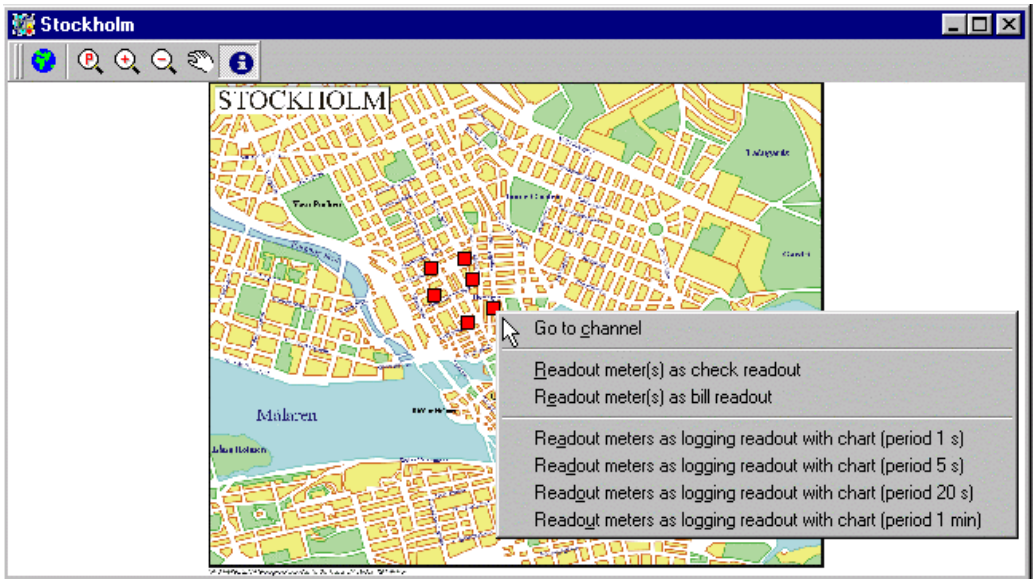
Incidentally, with cancelled procedures it is possible to call up the online graphics and to activate it afterwards.

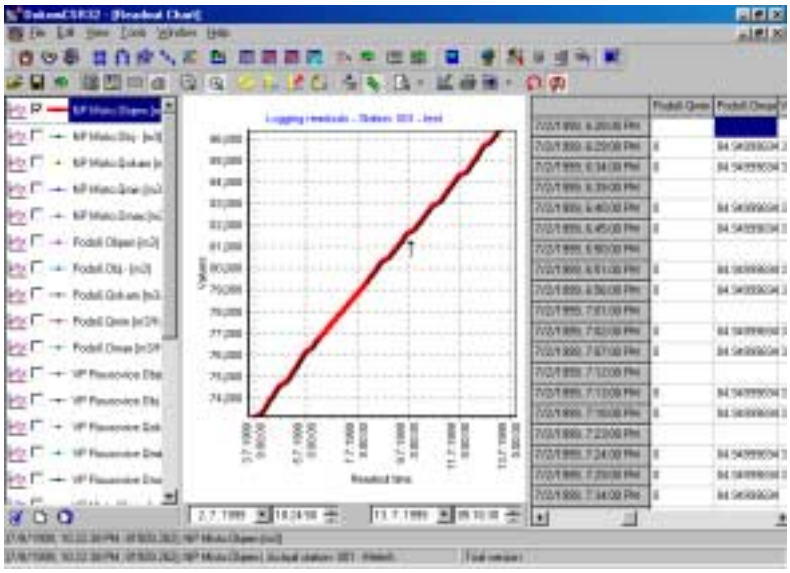
6 USING MAPS

When the maps have been configured at the DOKOM CS Configuration they can be used in Reading.



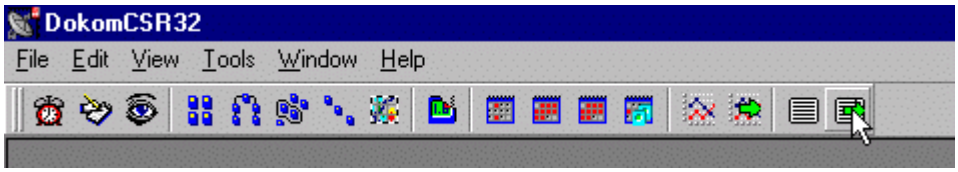


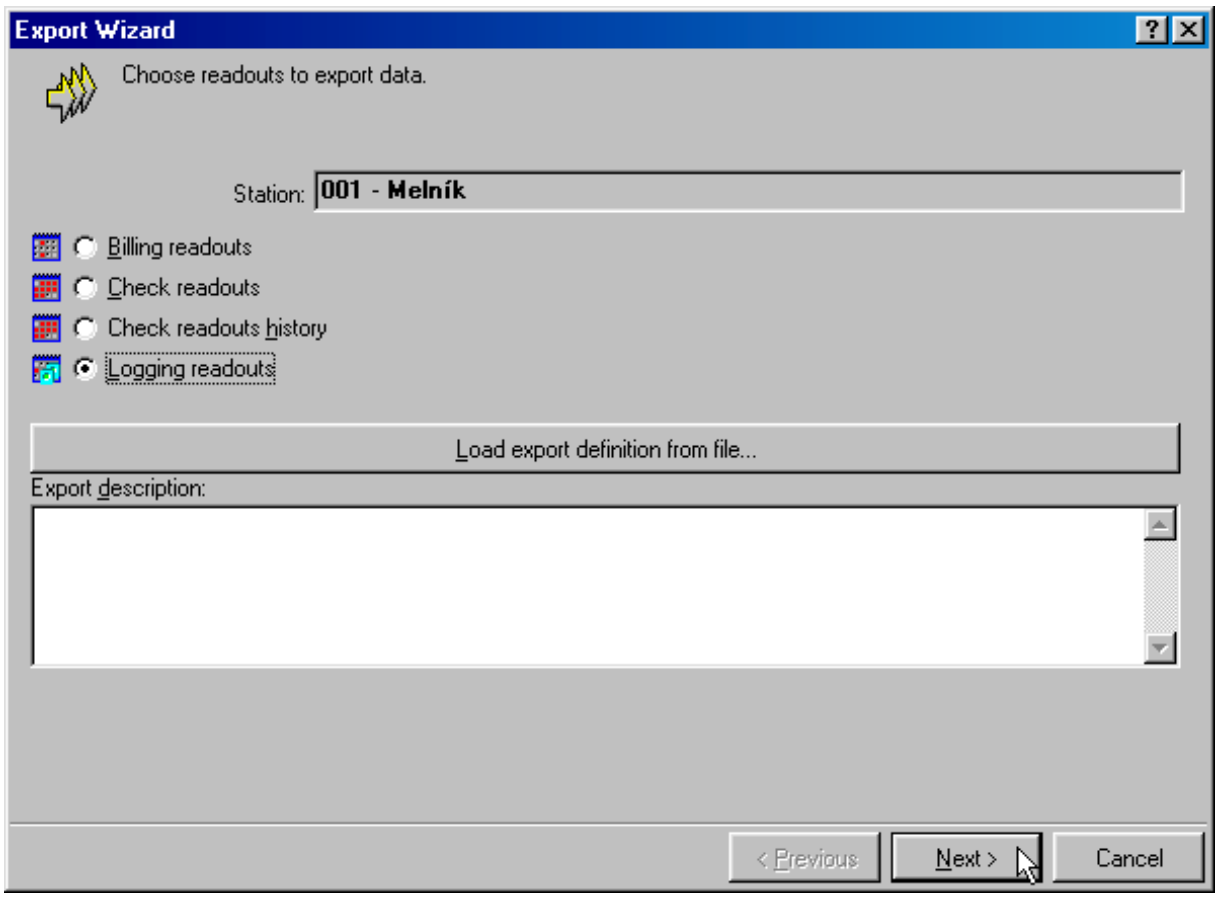

Stockholm
STOCKHOLM
Mälaren
Go to channel
Readout meter(s) as check readout
Readout meter(s) as bill readout
Readout meters as logging readout with chart (period 1 s)
Readout meters as logging readout with chart (period 5 s)
Readout meters as logging readout with chart (period 20 s)
Readout meters as logging readout with chart (period 1 min)

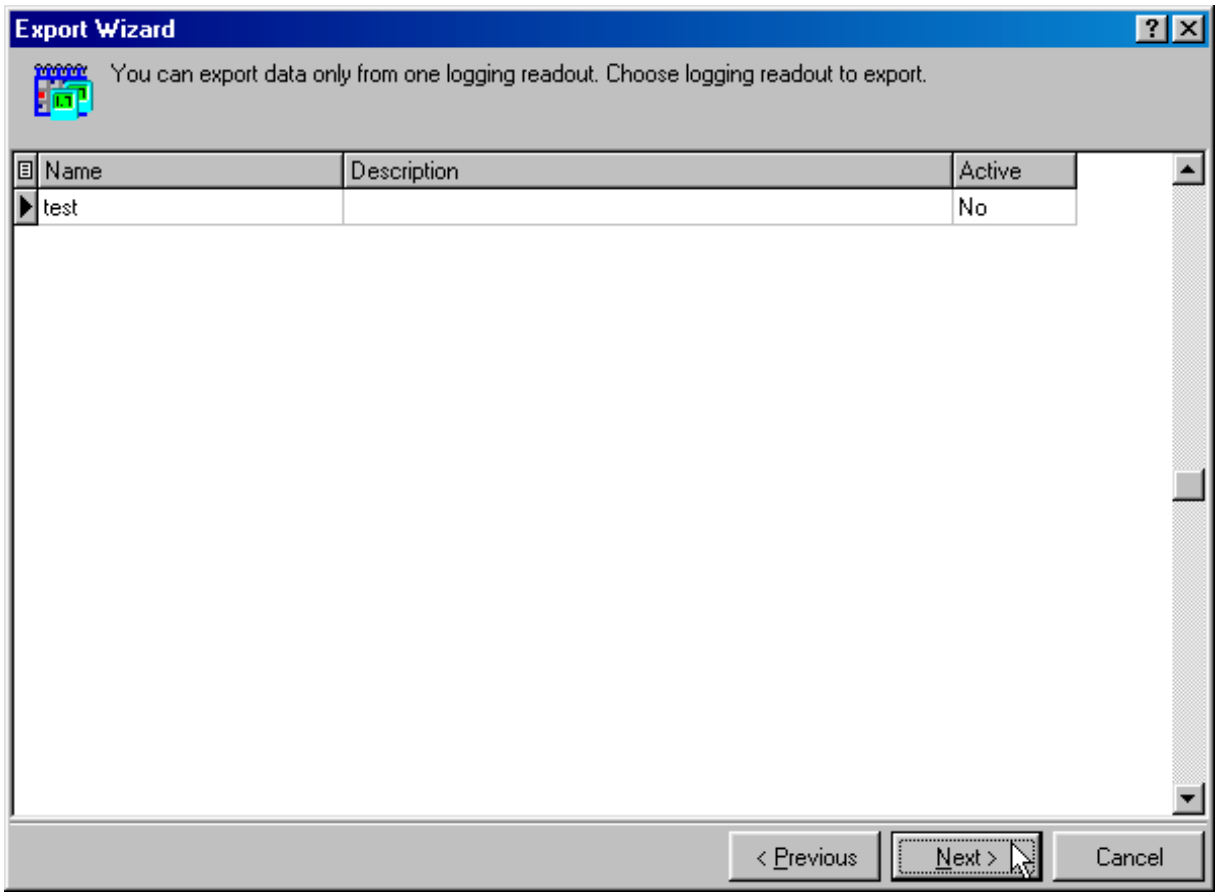


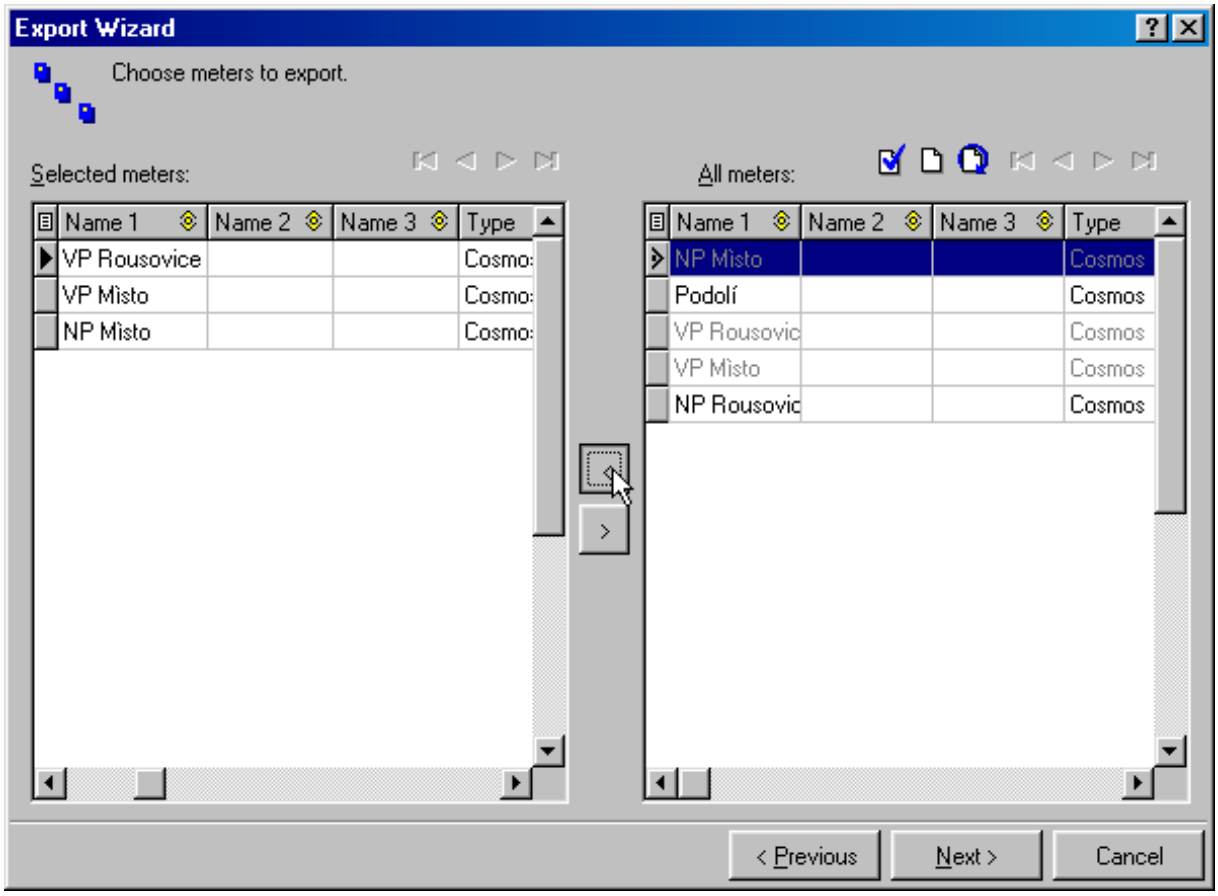
7 EXPORTING THE READOUT RESULTS

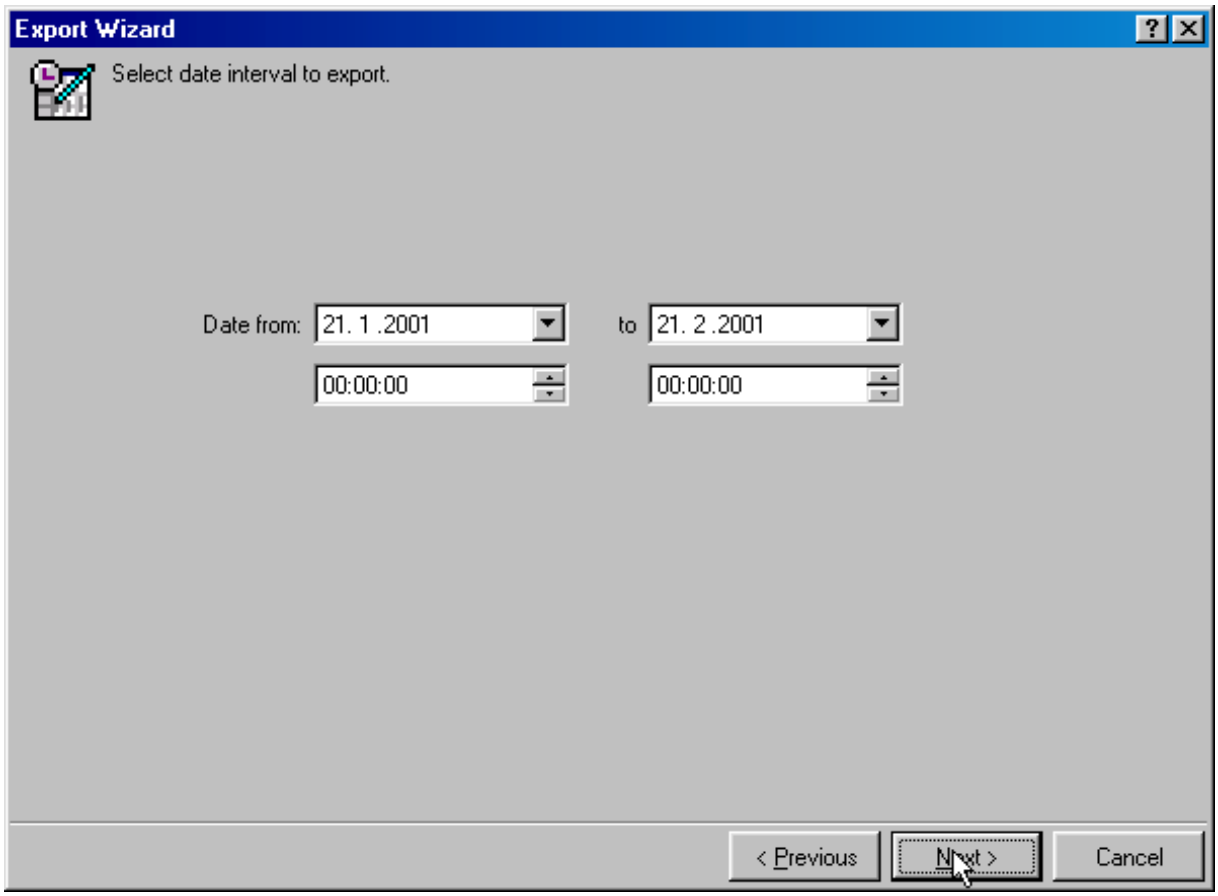
7.1 Data Export



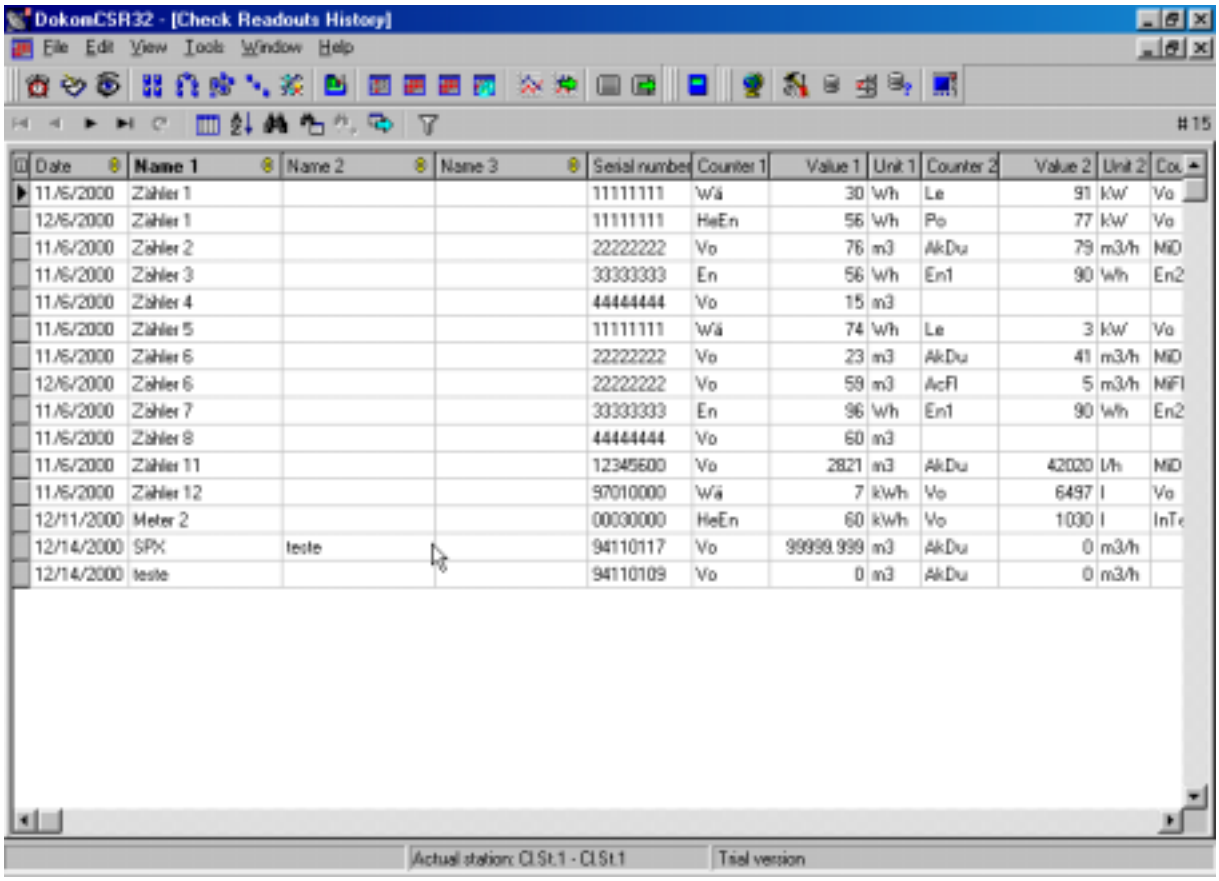



Export Wizard
You can export data only from one logging readout. Choose logging readout to export.
Name
Description
Active
test
No
< Previous
Next >
Cancel

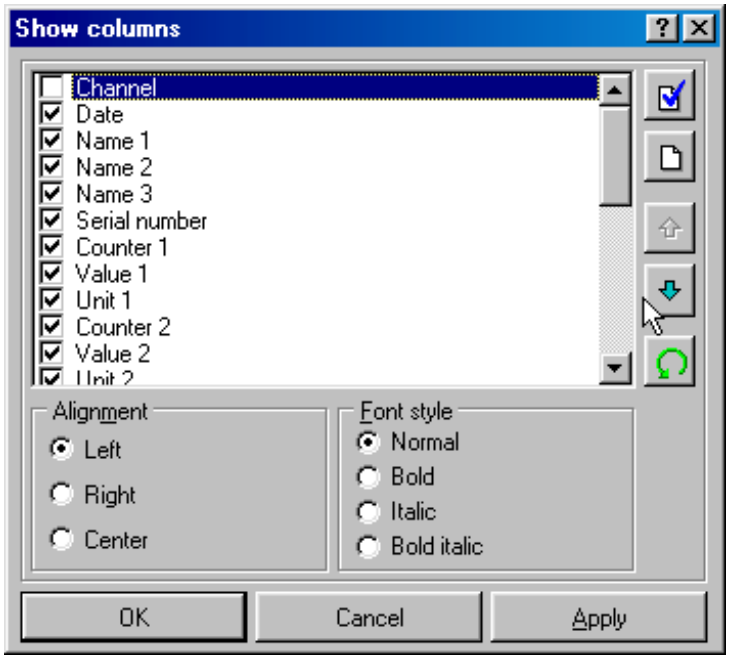

Export Wizard
Choose meters to export.
Selected meters:
All meters:
Name 1
Name 2
Name 3
Type
VP Rousovice
VP Misto
NP Misto
Podolí
< Previous
Next >
Cancel

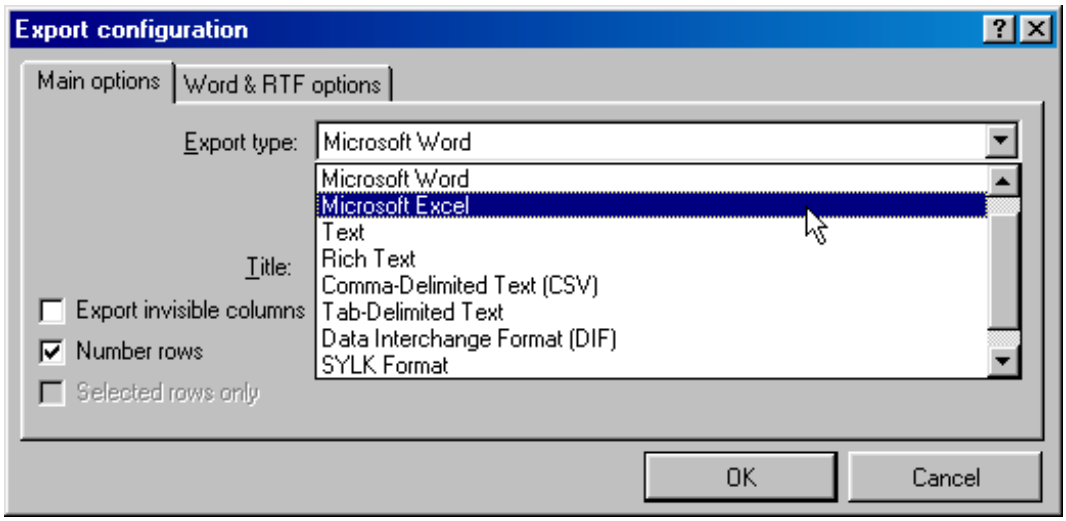


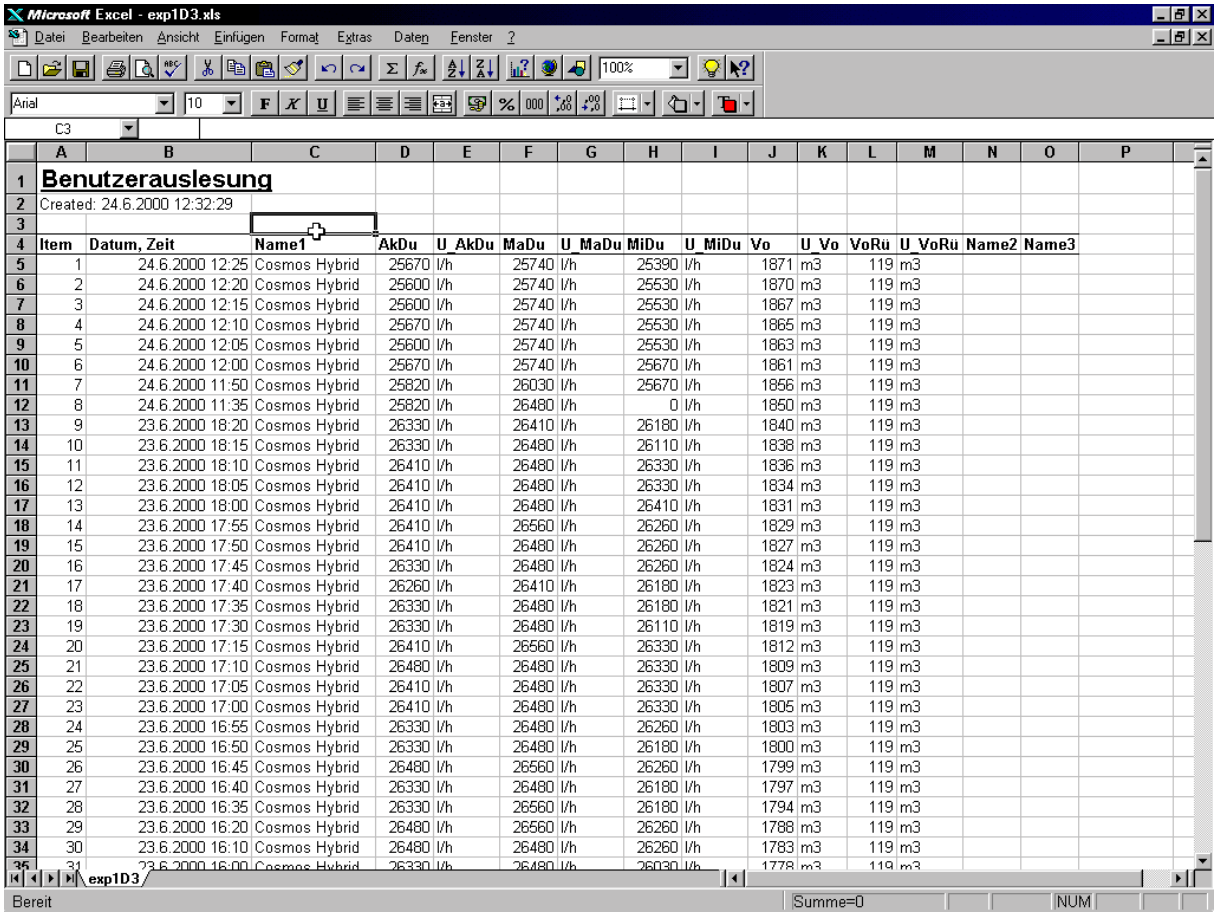
- [x] VoRü [m3]
- [x] Vo [C]
- [x] Vo [l]
- [ ] Te [C]
- [x] AkDu [l/h]
- [x] AkDu [m3/h]
- [x] MaDu [l/h]
- [x] MiDu [l/h]
- [ ] Rü [C]
- [x] Vo [m3]
- [ ] Wä [kWh]


DokomCSR32 - [Check Readouts History]
File Edit View Tools Window Help
Date Name 1 Name 2 Name 3 Serial numbe Counter 1 Value 1 Unit 1 Counter 2 Value 2 Unit 2
11/6/2000 Zähler 1 11111111 Wä 30 Wh Le 91 kW Vo
12/6/2000 Zähler 1 11111111 HeEn 56 Wh Po 77 kW Vo
11/6/2000 Zähler 2 22222222 Vo 76 m3 AkDu 79 m3/h MiD
11/6/2000 Zähler 3 33333333 En 56 Wh En1 90 Wh En2
11/6/2000 Zähler 4 44444444 Vo 15 m3
11/6/2000 Zähler 5 11111111 Wä 74 Wh Le 3 kW Vo
11/6/2000 Zähler 6 22222222 Vo 23 m3 AkDu 41 m3/h MiD
12/6/2000 Zähler 6 22222222 Vo 59 m3 AcFl 5 m3/h MiFl
11/6/2000 Zähler 7 33333333 En 96 Wh En1 90 Wh En2
11/6/2000 Zähler 8 44444444 Vo 60 m3
11/6/2000 Zähler 11 12345600 Vo 2821 m3 AkDu 42020 l/h MiD
11/6/2000 Zähler 12 97010000 Wä 7 kWh Vo 6497 l Vo
12/11/2000 Meter 2 00000000 HeEn 60 kWh Vo 1030 l InT
12/14/2000 SPX teste 94110117 Vo 99999.999 m3 AkDu 0 m3/h
12/14/2000 teste 94110109 Vo 0 m3 AkDu 0 m3/h
Actual station: CLSt.1 - CLSt.1
Trial version

By pressing the table icon the readout results are displayed as table. Here the order of the columns can be arranged. Columns can also be hidden. Thus a flexible format is provided to adapt to the intended application.

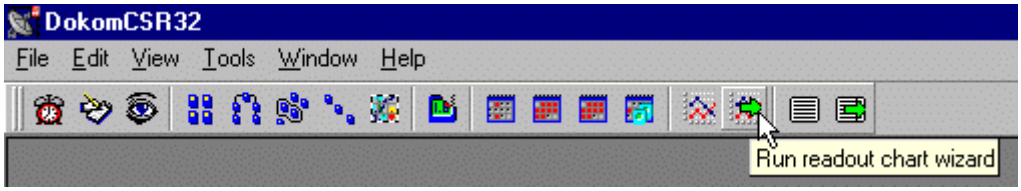


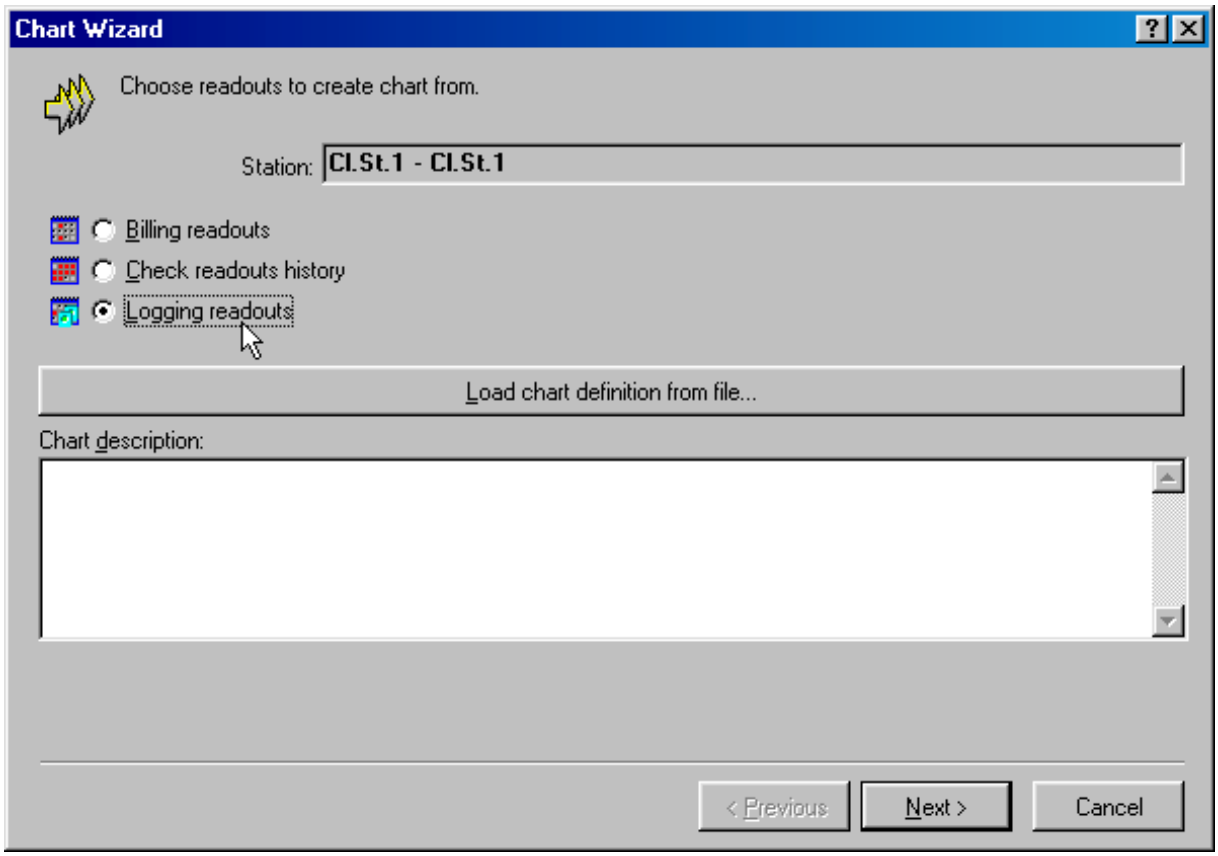


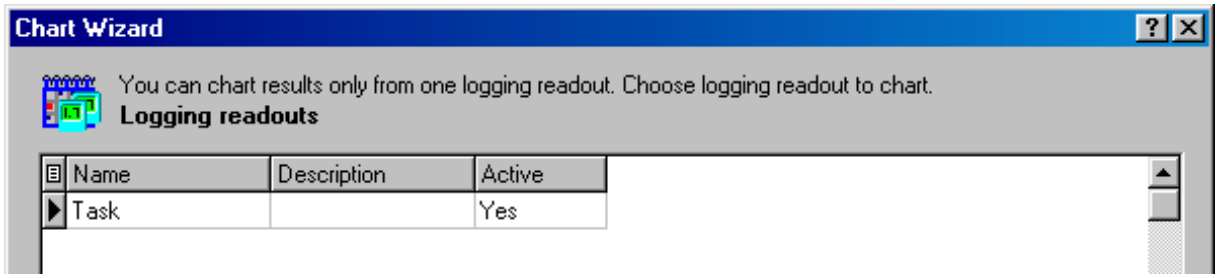


Item	Datum, Zeit	Name1	AkDu	U_AkDu	MaDu	U_MaDu	MiDu	U_MiDu	Vo	U_Vo	VoRü	U_VoRü	Name2	Name3
1	24.6.2000 12:25	Cosmos Hybrid	25670	l/h	25740	l/h	25390	l/h	1871	m3	119	m3		
2	24.6.2000 12:20	Cosmos Hybrid	25600	l/h	25740	l/h	25530	l/h	1870	m3	119	m3		
3	24.6.2000 12:15	Cosmos Hybrid	25600	l/h	25740	l/h	25530	l/h	1867	m3	119	m3		
4	24.6.2000 12:10	Cosmos Hybrid	25670	l/h	25740	l/h	25530	l/h	1865	m3	119	m3		
5	24.6.2000 12:05	Cosmos Hybrid	25600	l/h	25740	l/h	25530	l/h	1863	m3	119	m3		
6	24.6.2000 12:00	Cosmos Hybrid	25670	l/h	25740	l/h	25670	l/h	1861	m3	119	m3		
7	24.6.2000 11:50	Cosmos Hybrid	25820	l/h	26030	l/h	25670	l/h	1856	m3	119	m3		
8	24.6.2000 11:35	Cosmos Hybrid	25820	l/h	26480	l/h	0	l/h	1850	m3	119	m3		
9	23.6.2000 18:20	Cosmos Hybrid	26330	l/h	26410	l/h	26180	l/h	1840	m3	119	m3		
10	23.6.2000 18:15	Cosmos Hybrid	26330	l/h	26480	l/h	26110	l/h	1838	m3	119	m3		
11	23.6.2000 18:10	Cosmos Hybrid	26410	l/h	26480	l/h	26330	l/h	1836	m3	119	m3		
12	23.6.2000 18:05	Cosmos Hybrid	26410	l/h	26480	l/h	26330	l/h	1834	m3	119	m3		
13	23.6.2000 18:00	Cosmos Hybrid	26410	l/h	26480	l/h	26410	l/h	1831	m3	119	m3		
14	23.6.2000 17:55	Cosmos Hybrid	26410	l/h	26560	l/h	26260	l/h	1829	m3	119	m3		
15	23.6.2000 17:50	Cosmos Hybrid	26410	l/h	26480	l/h	26260	l/h	1827	m3	119	m3		
16	23.6.2000 17:45	Cosmos Hybrid	26330	l/h	26480	l/h	26260	l/h	1824	m3	119	m3		
17	23.6.2000 17:40	Cosmos Hybrid	26260	l/h	26410	l/h	26180	l/h	1823	m3	119	m3		
18	23.6.2000 17:35	Cosmos Hybrid	26330	l/h	26480	l/h	26180	l/h	1821	m3	119	m3		
19	23.6.2000 17:30	Cosmos Hybrid	26330	l/h	26480	l/h	26110	l/h	1819	m3	119	m3		
20	23.6.2000 17:15	Cosmos Hybrid	26410	l/h	26560	l/h	26330	l/h	1812	m3	119	m3		
21	23.6.2000 17:10	Cosmos Hybrid	26480	l/h	26480	l/h	26330	l/h	1809	m3	119	m3		
22	23.6.2000 17:05	Cosmos Hybrid	26410	l/h	26480	l/h	26330	l/h	1807	m3	119	m3		
23	23.6.2000 17:00	Cosmos Hybrid	26410	l/h	26480	l/h	26330	l/h	1805	m3	119	m3		
24	23.6.2000 16:55	Cosmos Hybrid	26330	l/h	26480	l/h	26260	l/h	1803	m3	119	m3		
25	23.6.2000 16:50	Cosmos Hybrid	26330	l/h	26480	l/h	26180	l/h	1800	m3	119	m3		
26	23.6.2000 16:45	Cosmos Hybrid	26480	l/h	26560	l/h	26260	l/h	1799	m3	119	m3		
27	23.6.2000 16:40	Cosmos Hybrid	26330	l/h	26480	l/h	26180	l/h	1797	m3	119	m3		
28	23.6.2000 16:35	Cosmos Hybrid	26330	l/h	26560	l/h	26180	l/h	1794	m3	119	m3		
29	23.6.2000 16:20	Cosmos Hybrid	26480	l/h	26560	l/h	26260	l/h	1788	m3	119	m3		
30	23.6.2000 16:10	Cosmos Hybrid	26480	l/h	26480	l/h	26260	l/h	1783	m3	119	m3		

7.2 Exporting Graphics







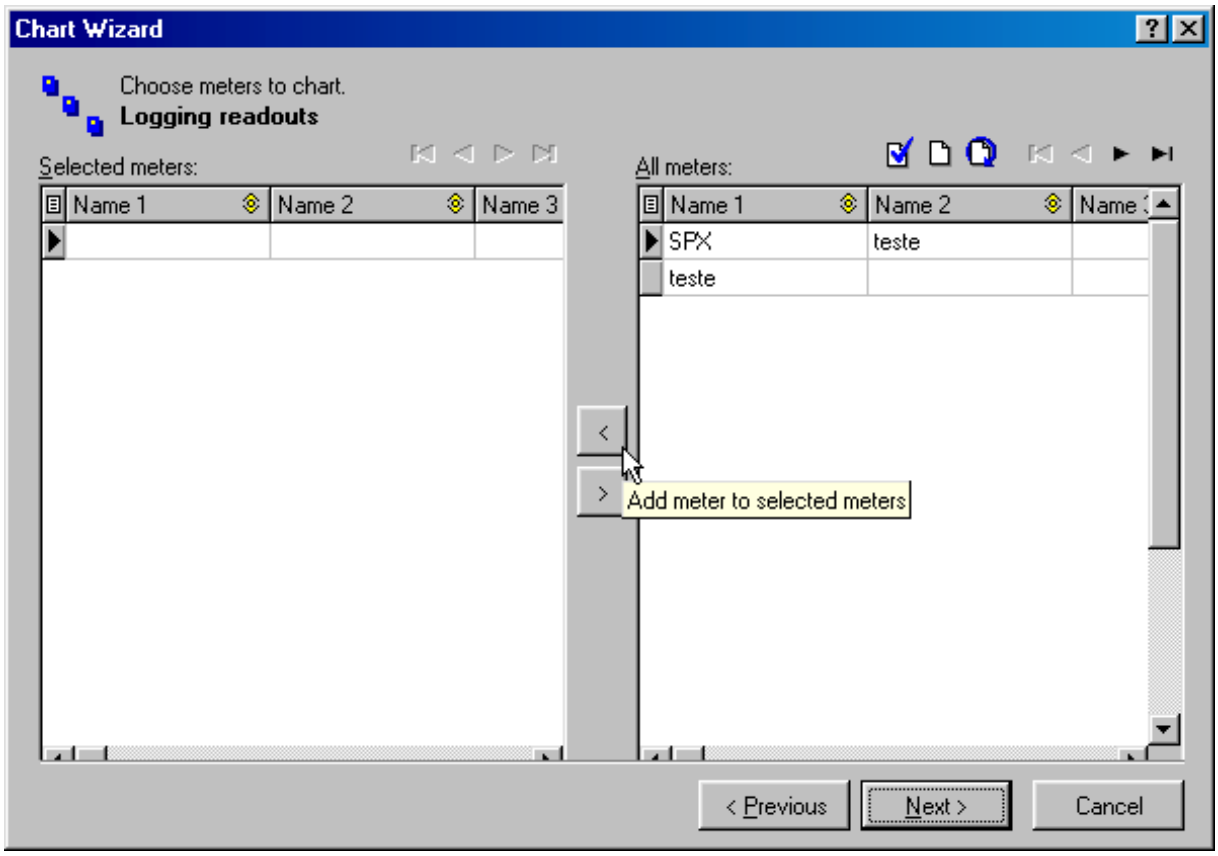


Chart Wizard
Choose meters to chart.
Logging readouts
Selected meters:
Name 1
Name 2
Name 3
All meters:
Name 1
Name 2
Name
SPX
teste
teste
Add meter to selected meters
< Previous
Next >
Cancel

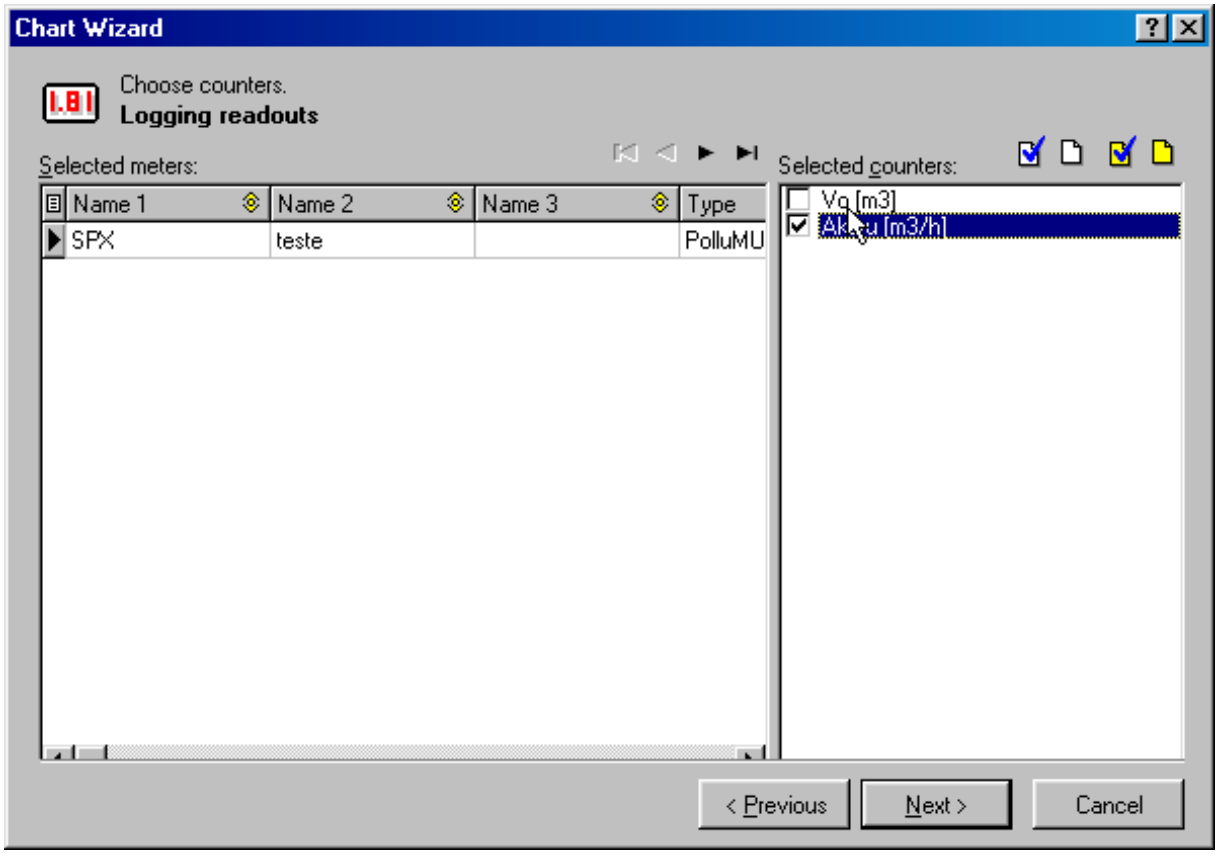


Chart Wizard
Choose counters.
Logging readouts
Selected meters:
Name 1
Name 2
Name 3
Type
SPX
teste
PolluMU
Selected counters:
Vg [m3]
Ak u [m3/h]
< Previous
Next >
Cancel

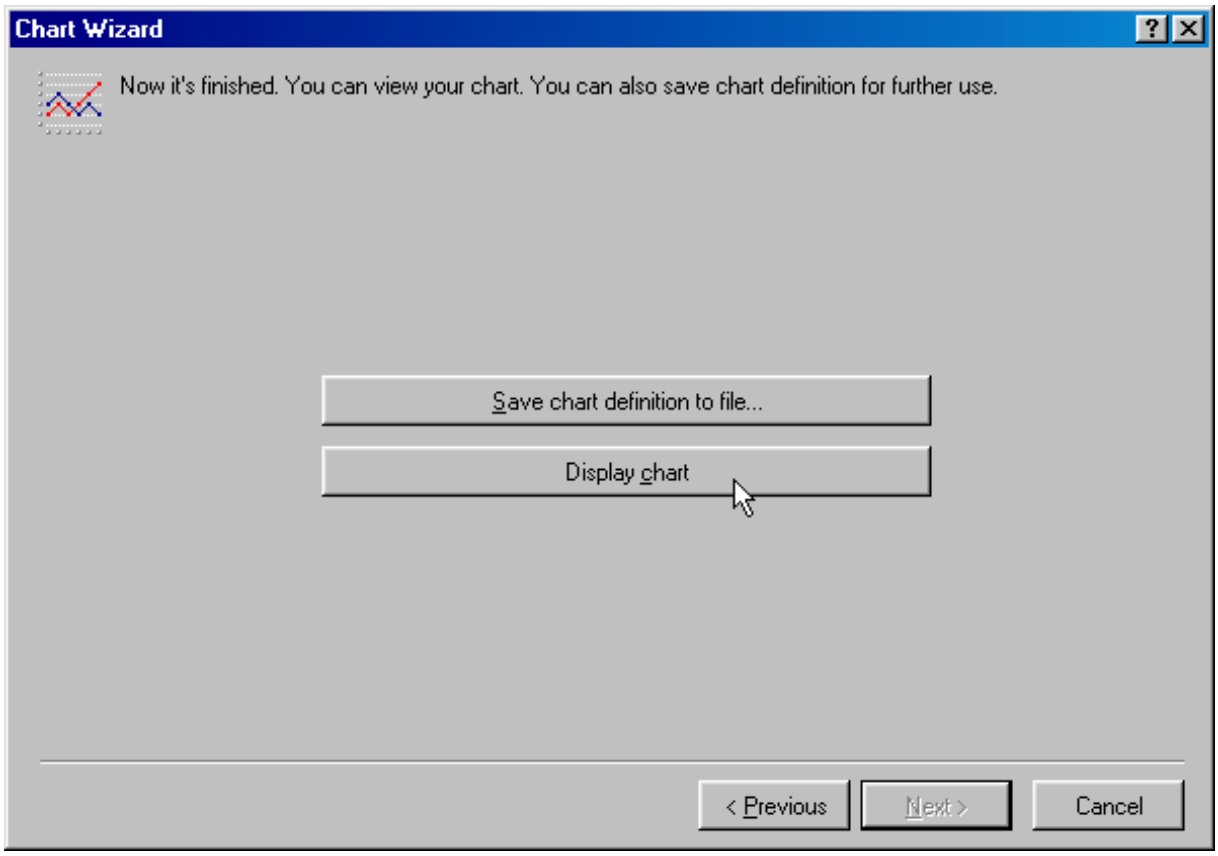
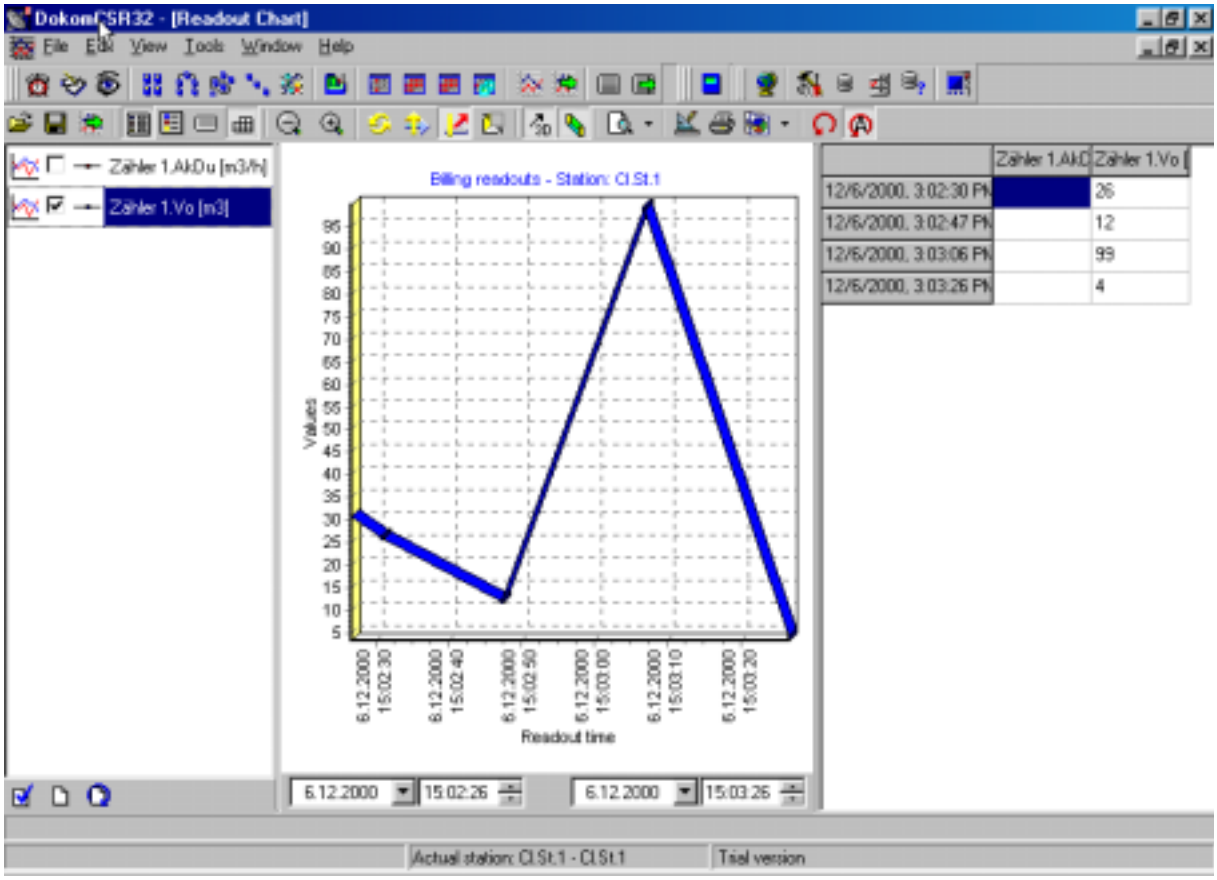
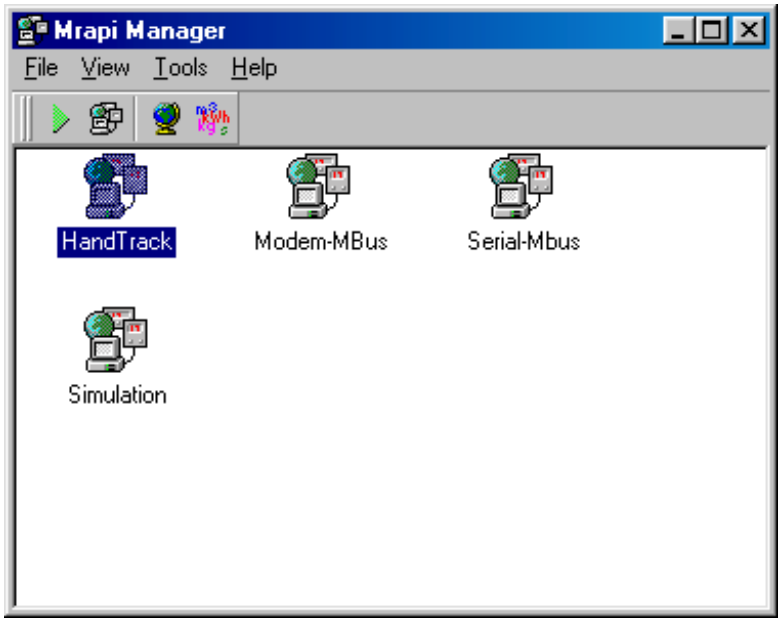


Chart Wizard
Now it's finished. You can view your chart. You can also save chart definition for further use.
Save chart definition to file...
Display chart
< Previous
Next >
Cancel


DokomCSR32 - [Readout Chart]
File Edit View Tools Window Help
Zähler 1.AkDu [m3/h]
Zähler 1.Vo [m3]
Billing readouts - Station: Cl.St.1
Values
Readout time
Zähler 1.AkD
Zähler 1.Vo
12/6/2000, 3:02:30 PM
12/6/2000, 3:02:47 PM
12/6/2000, 3:03:06 PM
12/6/2000, 3:03:26 PM
26
12
99
4
6.12.2000
15:02:26
6.12.2000
15:03:26
Actual station: Cl.St.1 - Cl.St.1
Trial version

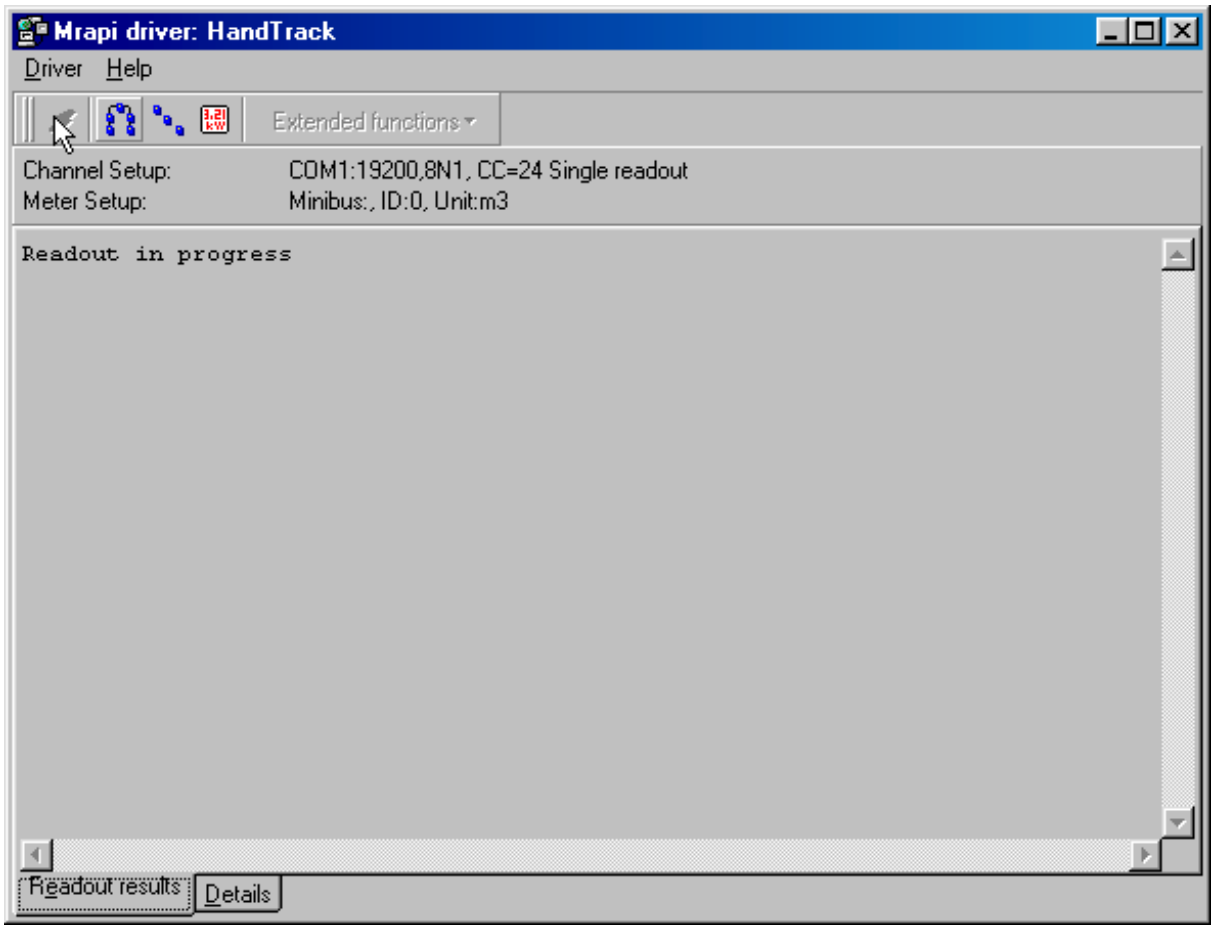
8 MRAPI-MANAGER

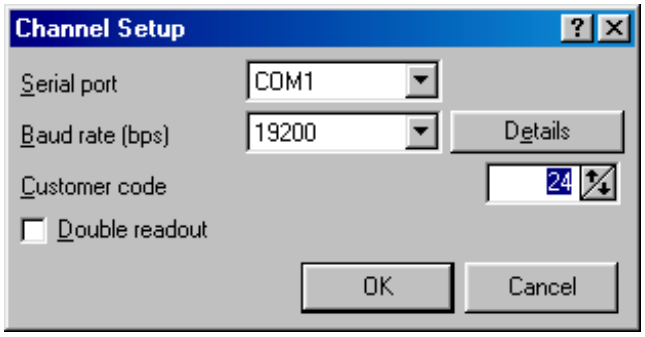


With the MRAPI Manager it is possible to read a meter quickly and directly without starting the DOKOM application

If the wanted type of meter is not at hand then one can click on the Tools, Units to select the correct one. One can also click on the Unit icon. To the left of the Unit icon is the Globe icon. By either clicking on this icon or by using Tools, Language one can change the language at any time. To start the wanted driver the icon can either be clicked upon or selected (Icon will appear blue in colour) and then the green arrow clicked.

8.1 HandTrack-Driver



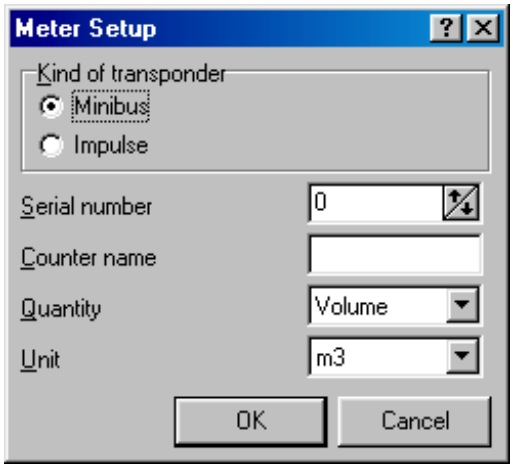


After selecting the HandTrack-Driver the screen above appears. To setup the parameters of a channel for readout of a meter with a HandTrack, click upon Driver and then Channel Settings or click upon Channel icon. This icon is the second from the right.

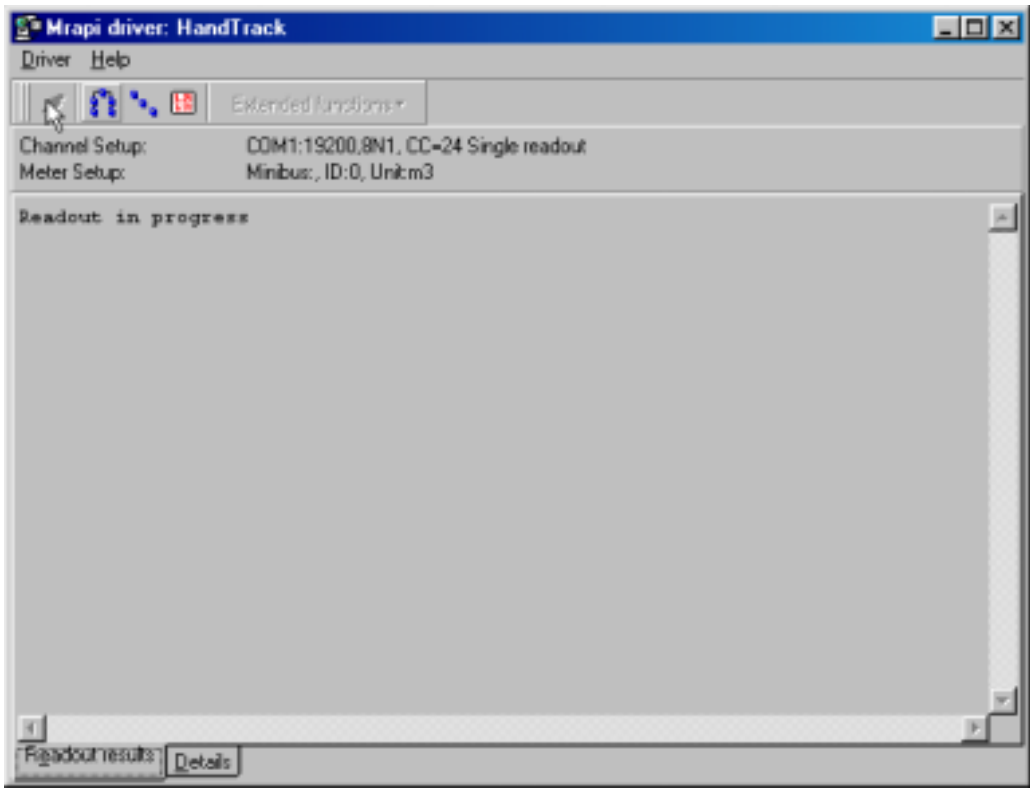
Here the corresponding COM-Port, address and the double readout function can be set. A second reading automatically transfers the actual meter reading of the connected meter. Thereby after the second readout one attains without a doubt the actual value of the counter.

After selecting the menu option Configuration, the parameters of the communication with the RS 232 port can be set. For communication with the HandTrack the parity and

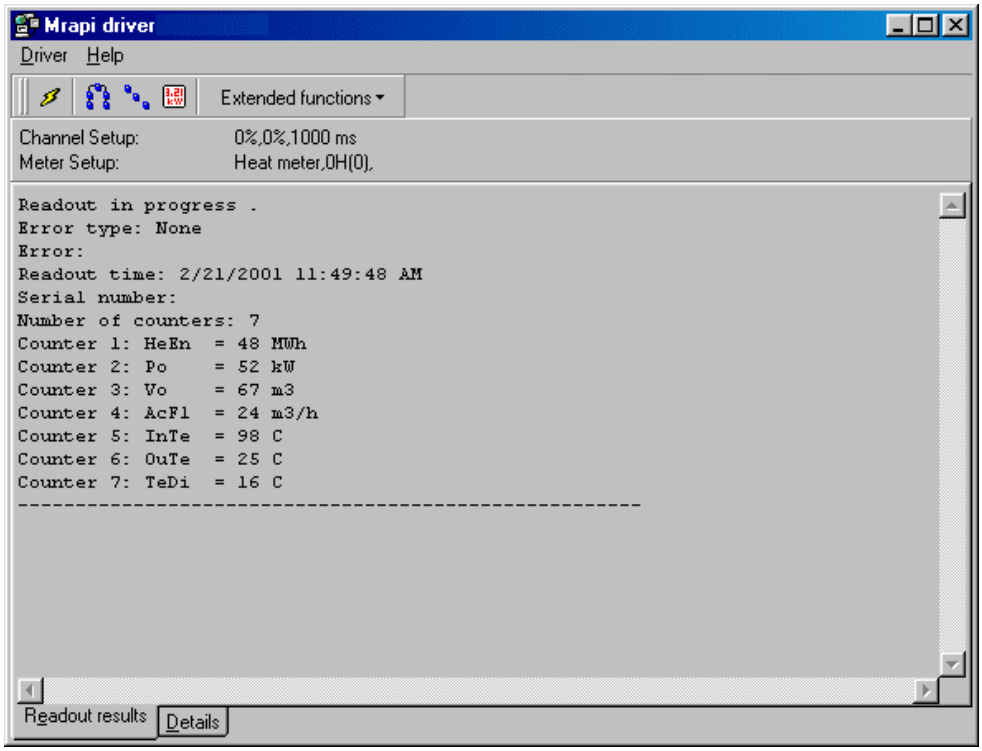
the data flow control must be set to “none”. The above-depicted settings must also be set exactly as in the diagram. By clicking on “OK” the settings are enabled.



After clicking upon the Meter icon, right next to the Channel symbol, or either by selecting the menu options Driver and the Settings the above-depicted screen appears. Here one can choose between Transponder types: Minibus or Impulse. For direct readout of a particular meter, the serial number of the meter can be entered. The number of decimal places of the serial number corresponding to the meter can be filled by inserting zeros before the actual number. The selection of the meter name can be entered in the next field. The type and unit of the dependent Transponder and meter can be set in the next two fields. With “OK” the entered data is saved and the main menu of the HandTrack appears.

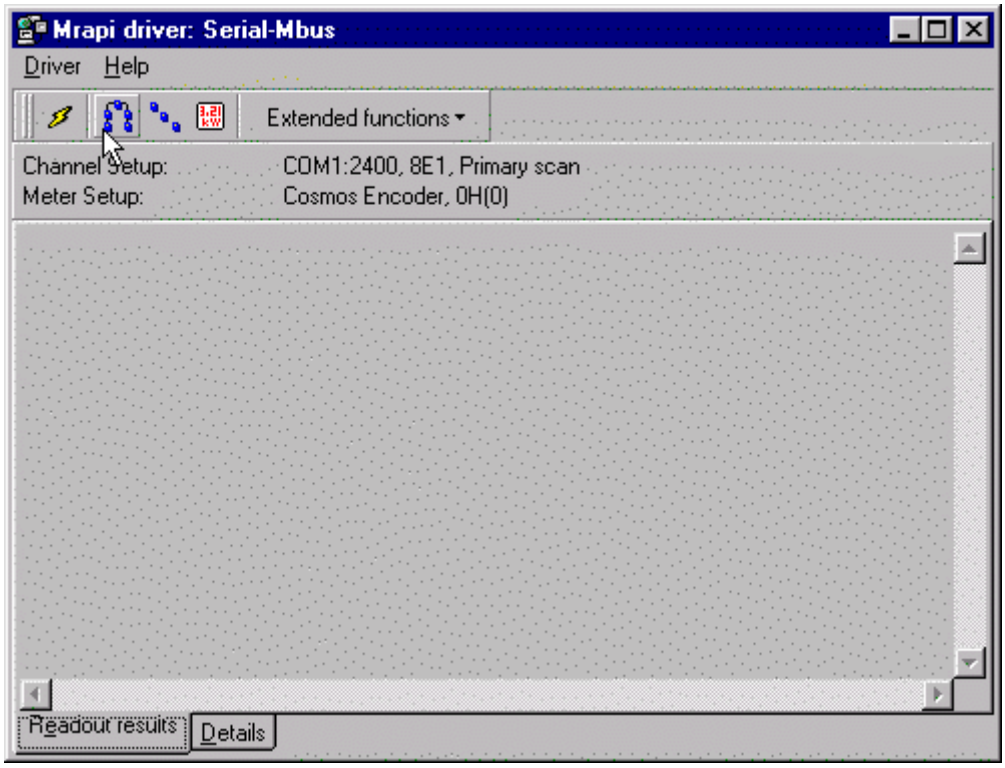


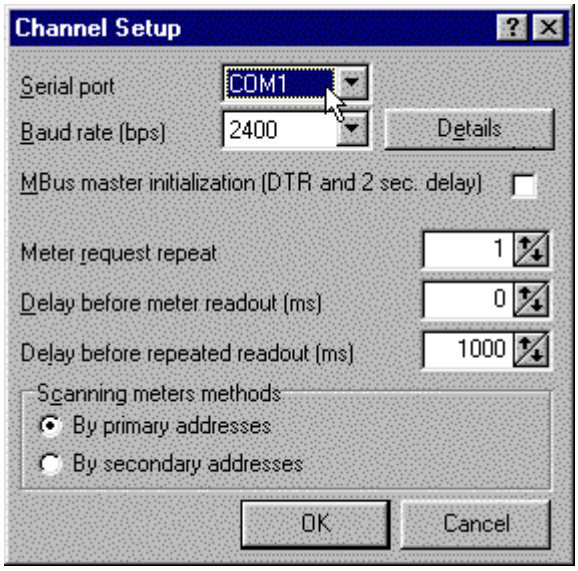
The settings for the Channel and the Meter now appear above in the window as a reference. By clicking upon “Start Readout” the radio readout is commenced.



In the “Readout Results” window the following message appears “Readout Running”. Under this message an increasing number of points are displayed as the readouts progress. Directly after this the readout results of the selected meter are displayed. By clicking on the “Details” tab the values of all other readout meters can be viewed alongside the selected meter. The menu point “Further Functions” is not functional with the HandTrack driver. The readout results appear as follows:

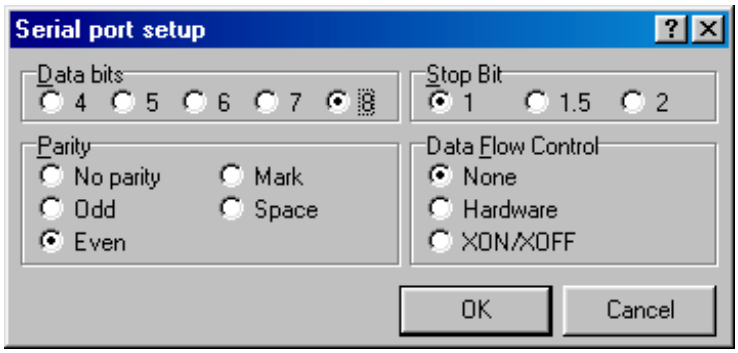
8.2 RS 232 – Driver:





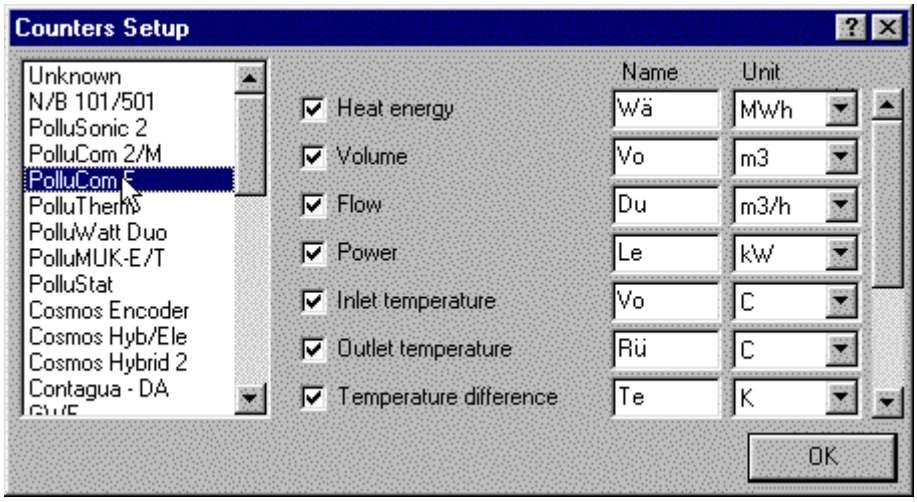
After selecting the RS232 driver the following window appears. It is also possible here, just like in the MRAPI main menu, to change the meter values. Before the readout the channel and the meter must be set. After clicking on “Channel Settings” the following window will appear:

Here the number of readout attempts (after a failed readout), as well as the time before and after the readout repetition can be set. The COM-Port can also be set and the Bus-Master-Initialisation enabled.

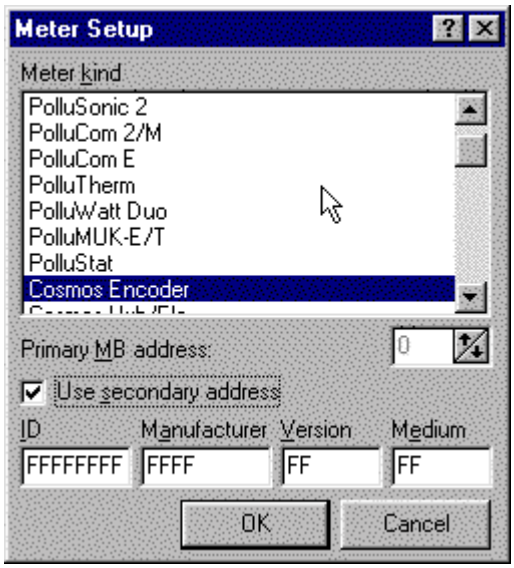


By clicking on Configuration the parameters of the RS232 connected periphery can be set. The previously set values appear with the parameter of the MBus-Centrals of type PW.

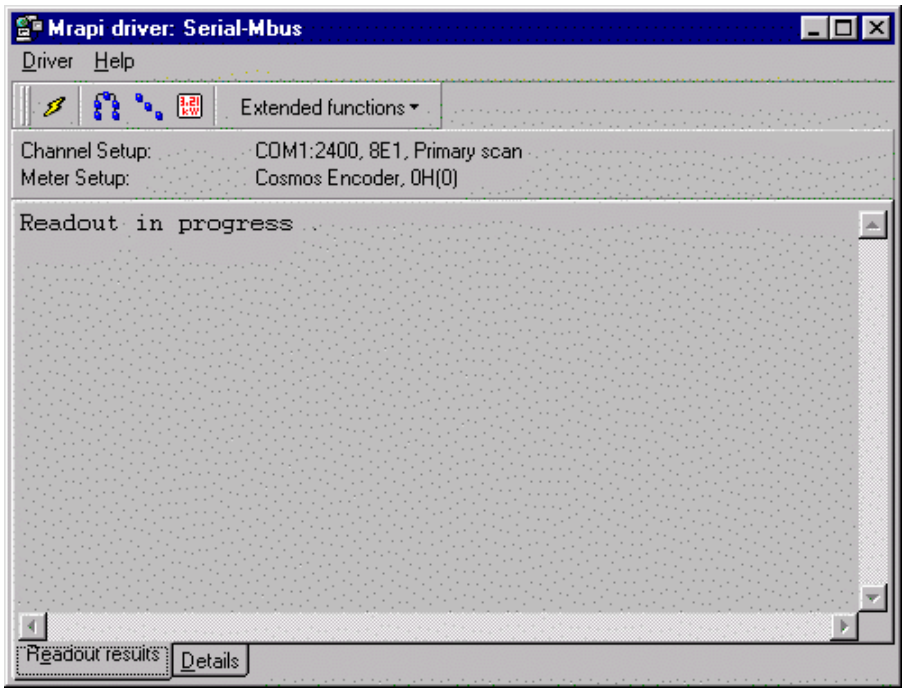
By clicking on “OK” the set values are enabled.

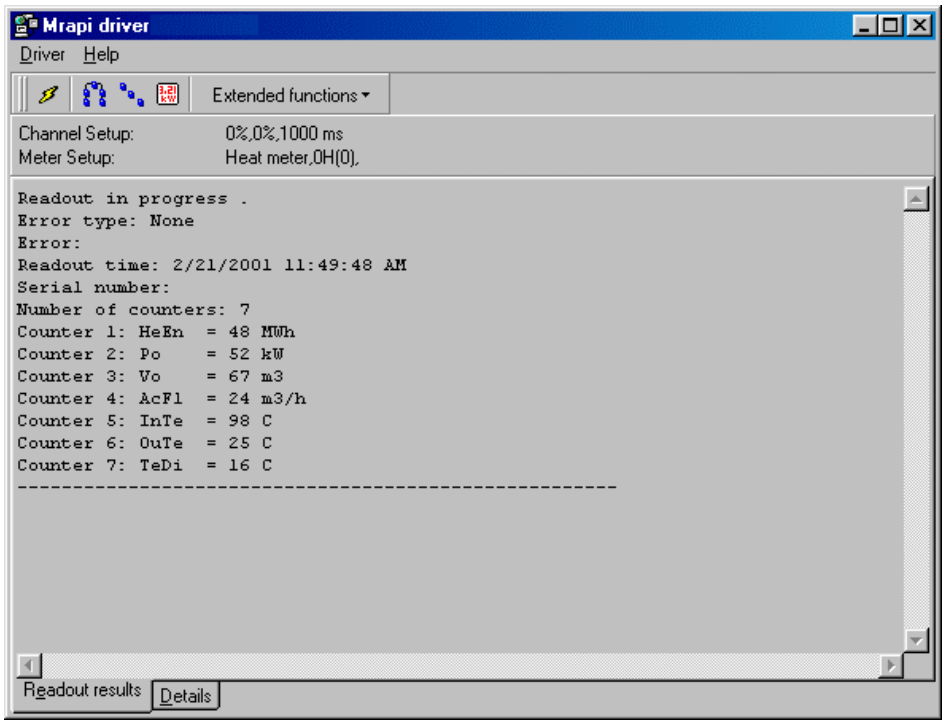


By clicking on “Meter Settings” the connected M-Bus-Device/Meter can be selected and configured. By scrolling through the devices the applicable device can be selected. Next the M-Bus address must be set (Left picture). If the M-Bus address is not know, by clicking on the “Use secondary address” check box, then the identification takes place by means of the entered secondary address (Right picture).



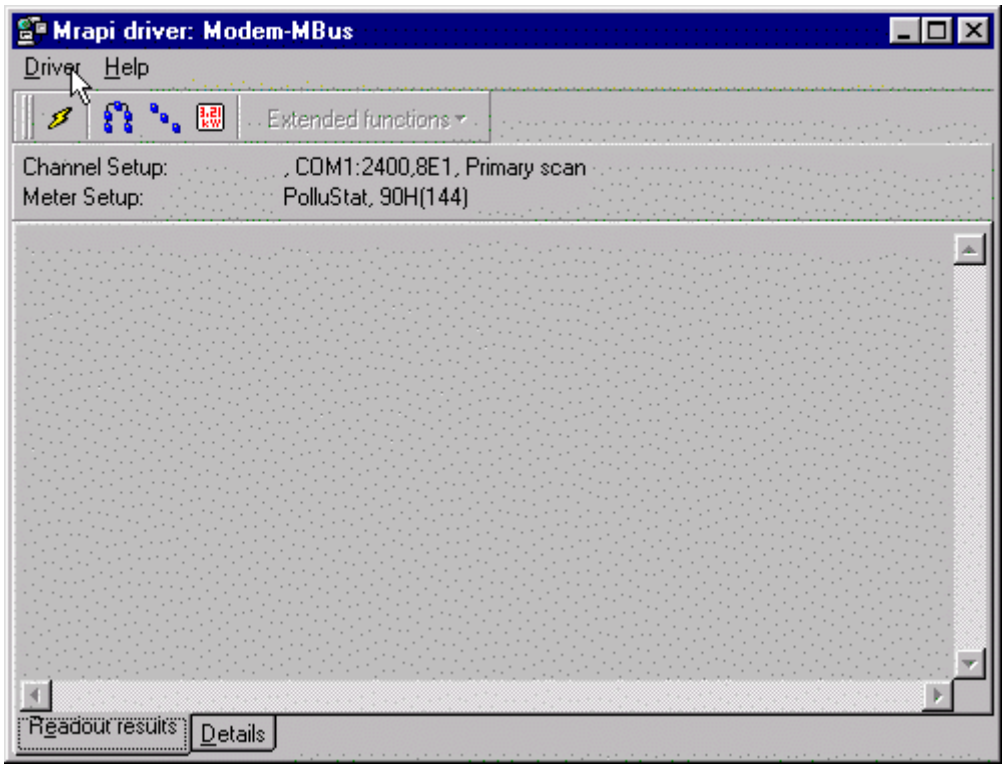
The settings of the channel now appear at the top of the window as a reference. By clicking on “Start Readout” the reading can be started.





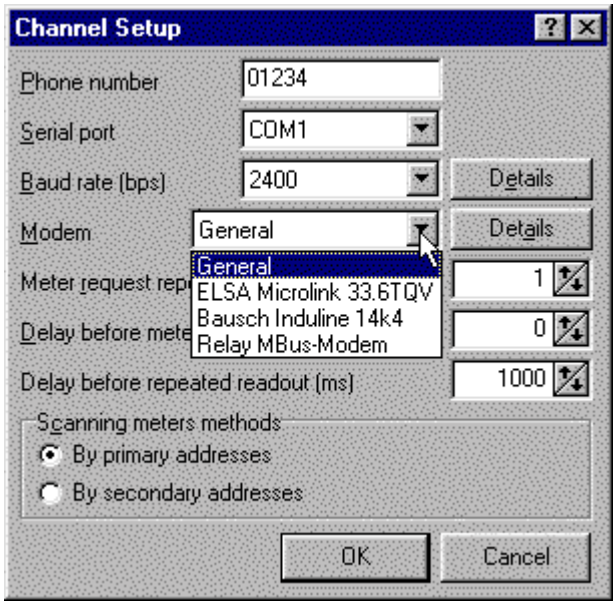
In the “Readout Results” window the following message appears “Readout Running”. Under this message an increasing number of points are displayed as the readouts progress. Directly after this the readout results of the selected meter are displayed. By clicking on the “Details” tab information related to the transferred protocols can be viewed. The readout results appear as follows:

8.3 Modem-Mbus – Driver:

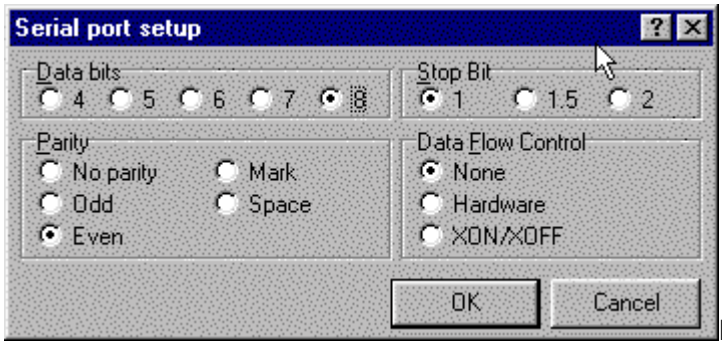


After selecting the Modem-MBus-Driver the window above appears. It is also possible here, just like in the MRAPI-Main menu, to alter the meter values. Before readout the

meter and the channel must be setup. After clicking on the “Channel Setup” the following window appears.

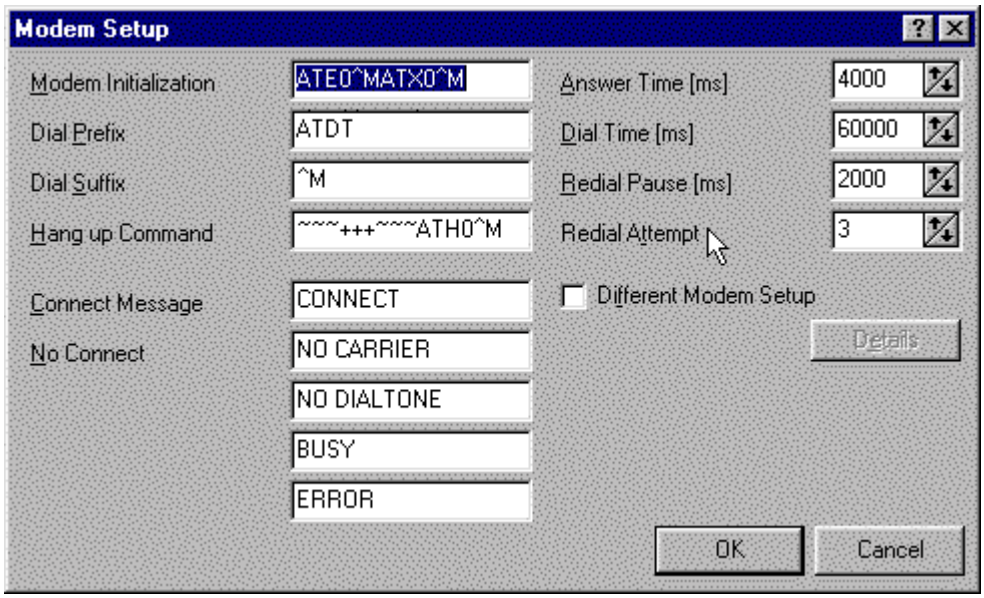


Here the number of readout attempts (after a failed readout), as well as the time before and after the readout repetition can be set. The COM-Port can also be set and the number of the requested modem.



By clicking on Configuration the parameters of the RS232 connected periphery can be set which are necessary for the communication with the connected Modem. Below the necessary settings are shown which are needed for communication with an M-Bus modem.

By clicking on “OK” the set values are enabled.

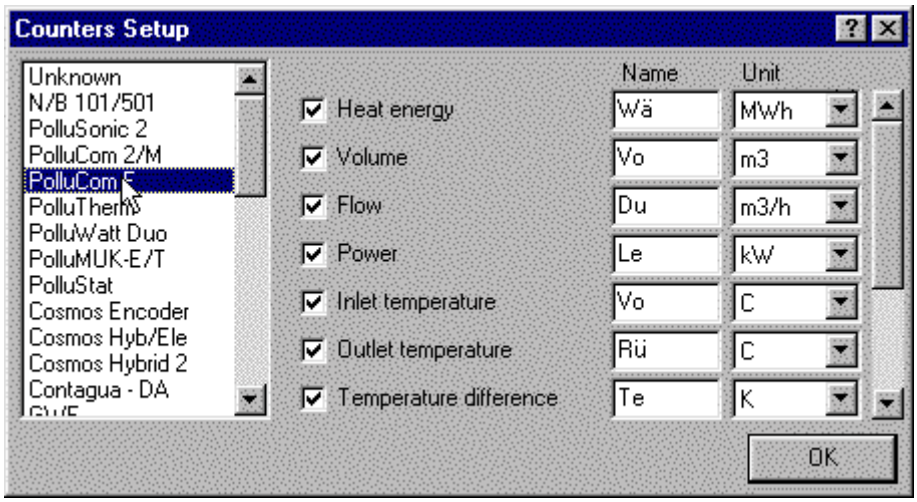


By clicking on “Modem” the parameters for recognition of the connected modem must be set. Below the settable parameters appear:

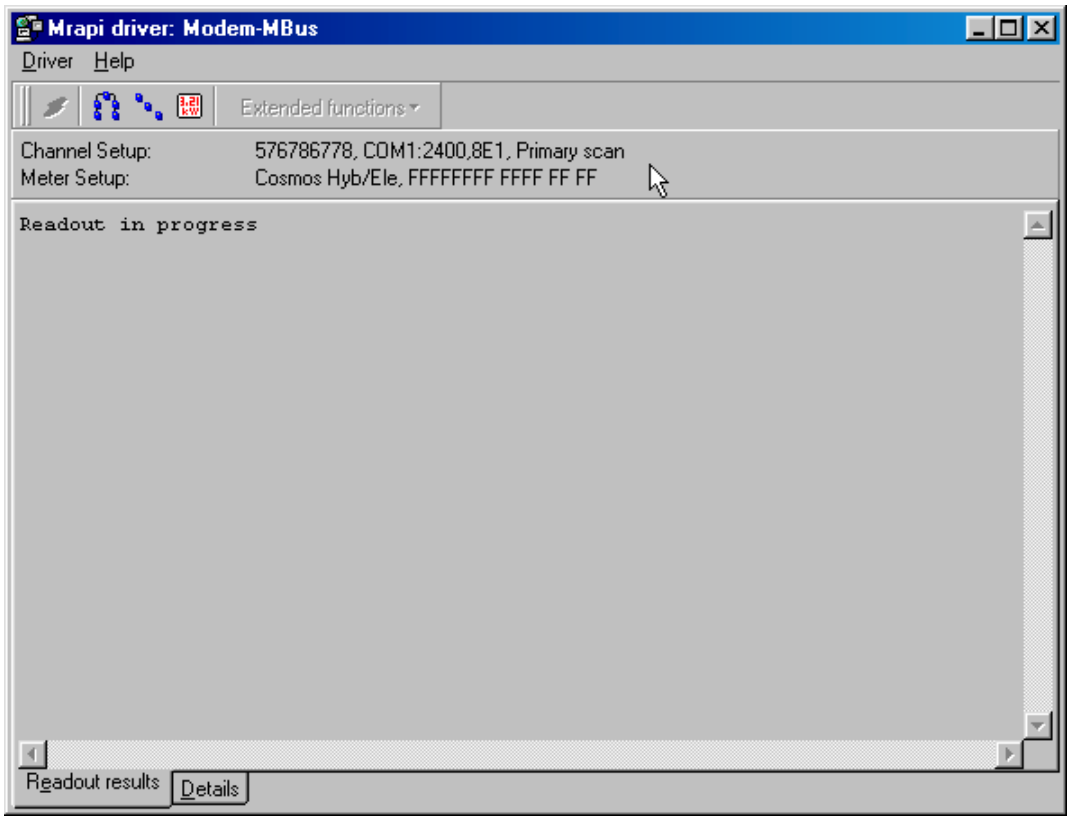
For recognition of the modem the required initialisation string, which can normally be found in the user manual, must be entered. As a prefix, ATDT for the Tone dialup or either ATDF for Frequency dialup, must be set. This setting is reliant on the dialup of telephone connection. The most widely used method is tone dialup.

The previously setup Suffix and Hang up command can be used. The settings for the active and deactive connections can also be left as is. The answer time, Dial time, time after a dialup attempt as well as the number of dialup attempts can individually and independently of the readout status be changed.

By clicking on “OK” the set values are enabled.



By clicking on “Meter Settings” the connected M-Bus-Device/Meter can be selected and configured. By scrolling through the devices the applicable device can be selected. Next the M-Bus address must be set (Left picture). If the M-Bus address is not know, by clicking on the “Use secondary address” check box, then the identification takes place by means of the entered secondary address (Right picture).

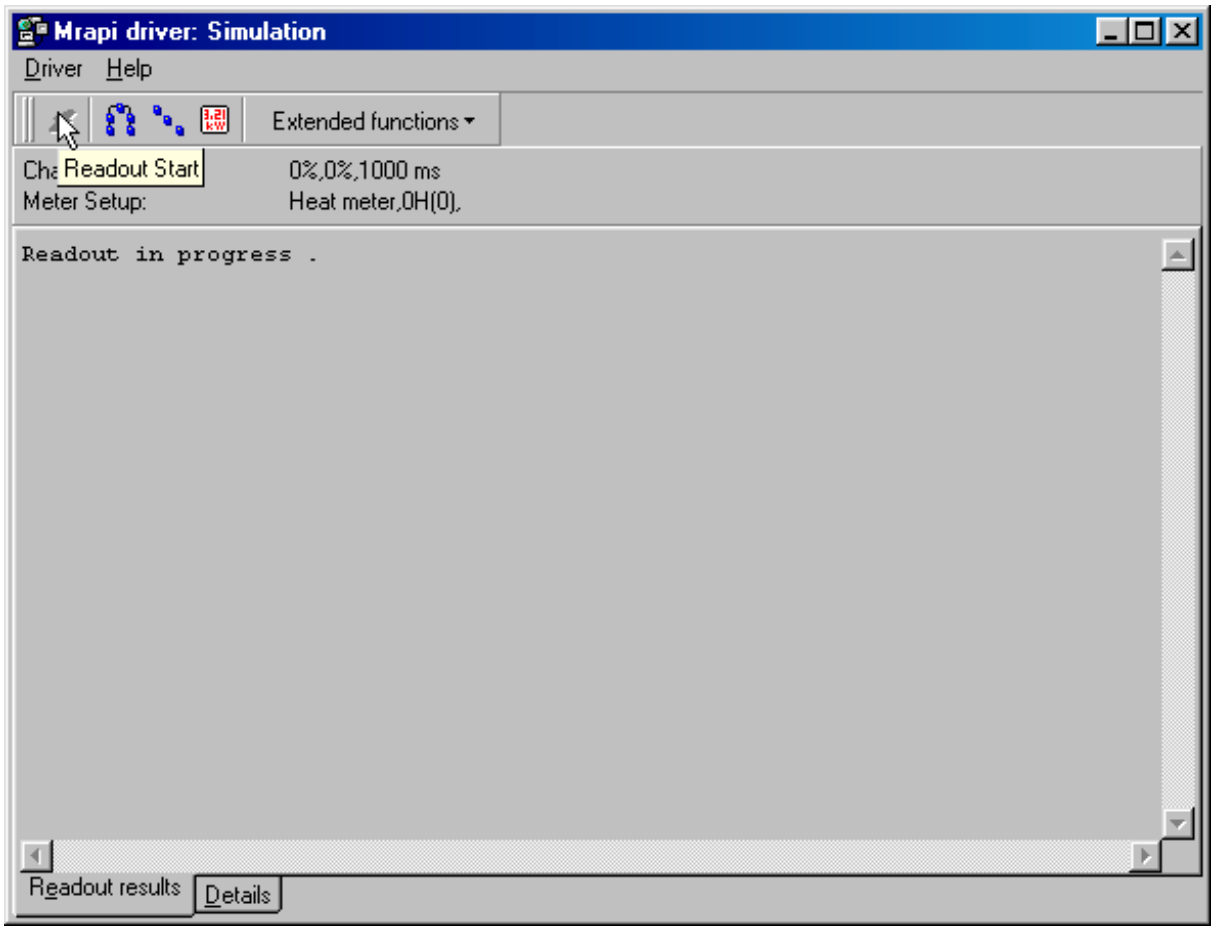


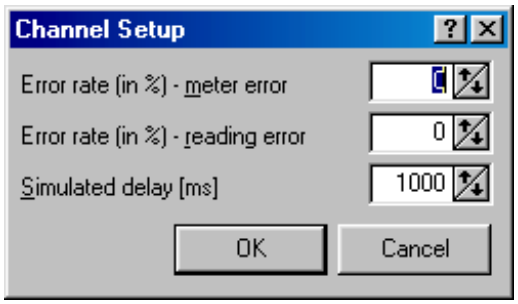
The settings for the Channel and the Meter now appear above in the window as a reference. By clicking upon “Start Readout” the radio readout is commenced.

In the “Readout Results” window the following message appears “Readout Running”. Under this message an increasing number of points are displayed as the readouts progress. Directly after this the readout results of the selected meter are displayed. By clicking on the “Details” tab the values of all other readout meters can be viewed alongside the selected meter. The menu point “Further Functions” is not functional with the HandTrack driver. The readout results appear as follows:

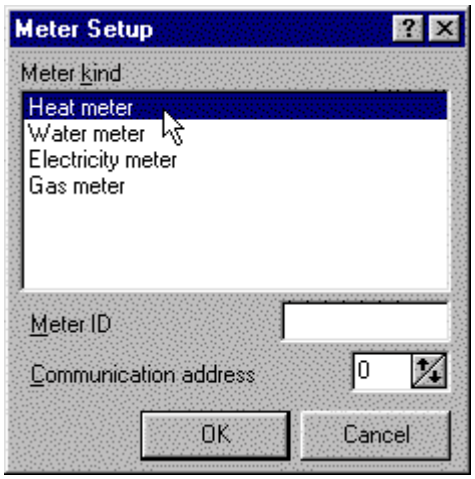
8.4 Simulation (Heat and Water Meters):

After selecting the simulation-driver (Water and heat meters) the above screen appears. It is also possible here, just like in the MRAPI-Main menu, to alter the meter values. When using this driver the preinstalled meters and channels are already made use of. However these fields can individually be changed. After clicking on “Channel Settings” the following window appears:



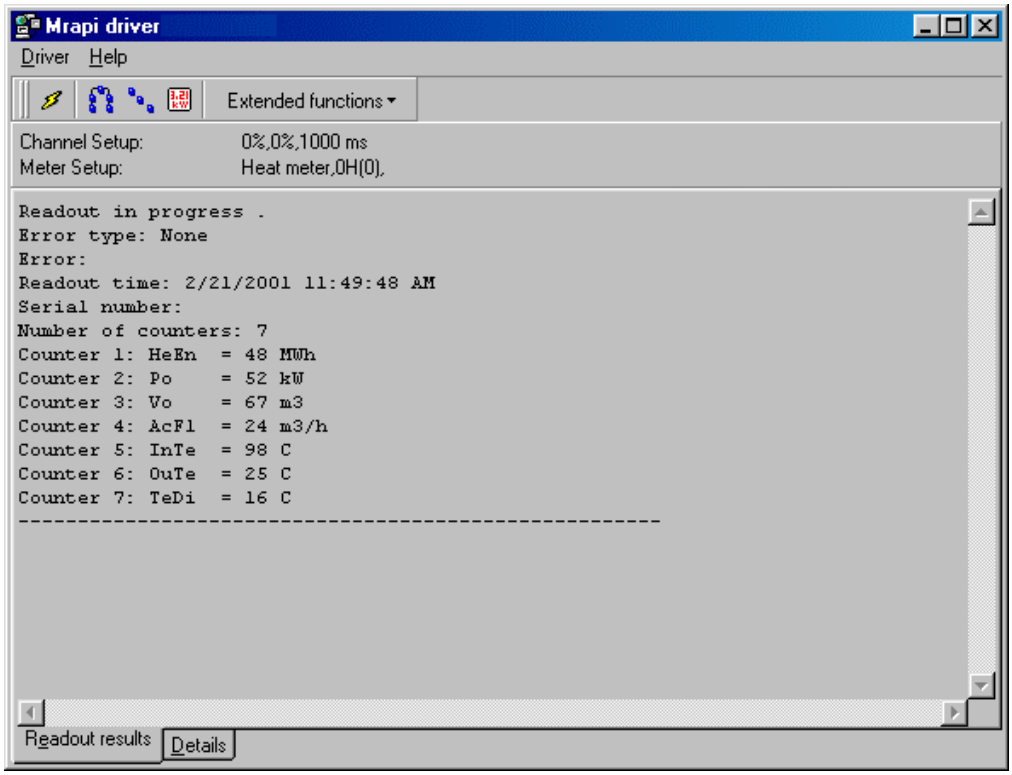


The simulated meter error rate for the meter error and the readout error can be set here. If these parameters are set to 100% in each case, then no readout results will be produced. To this the simulated readout time can also be adjusted. “OK” confirms the entered data.



After clicking on “Meter Setup” the following appears.

It is possible to set the meter type, the serial number and the M-Bus address. This allows for the simulated meter to have all the characteristics of a real meter. „OK“ confirms the entered data.



In the “Readout Results” window the following message appears “Readout Running”. Under this message an increasing number of points are displayed as the readouts progress. Directly after this the readout results of the selected meter are displayed. By

clicking on the “Details” tab in this simulation no information is displayed. After a successful readout the results will look similar to what is depicted here: The menu point “Further Functions” is not functional with the HandTrack driver. The readout results appear as follows:

9 INDEX

Billing 1-4, 2-5, 5-25
Resoulution 3-8
Auftragsarten 5-24
Reading 0-4, 1-3, **2-5**, 2-7, 3-8, **3-10**, 4-16, **4-19**, **4-22**, **5-24**, 5-25, 5-26, **5-27**, **5-28**, **5-30**, **5-31**, **5-32**, **5-33**, **5-34**

User Readout 5-26, **5-34**
User Groups 1-3, 1-4, 4-12, 4-15, 4-16

Data evaluation and Export 2-6
Databank 1-3, 4-12, 4-17, *4-18*
Saving Data 6-8
Decentralised stationary readout 0-2
DOKOM 0-4, **0-2**, 1-3, 2-5, 2-7, **3-8**, **3-10**, 4-11, 4-12, 4-17, *4-18*, **5-24**, **5-30**, **5-31**
DOKOM Configuration 2-7
DOKOM Reading 2-7

Setting Meter Values 7-1

Hard disk 3-8

Channel 4-14, **4-19**, **4-20**, **4-21**, **4-23**
Channels 1-3, 1-4, 4-13, *4-18*, **4-19**
Communication Driver 3-10

Mouse 3-8
M-Bus P 0-4
Mobile Readout 0-2
Modem-Mbus – Driver 7-3
MRAPI Manager 2-7, 7-1

Planer 2-5, **5-24**

RS 232 – Driver 7-3
RS232 4-18, **4-19**, **4-21**

Sammelstationen 4-17
Simulation 4-18, **4-19**, **4-21**
Simulation (Heat and Water Meters) 7-3
Saving 3-10
Special Procedures 5-28
Language 3-10, **4-22**
Station 1-3, 4-12, 4-17, *4-18*
Stations 1-3

Requirements 2-7

Meter **0-2**, 1-4, **2-5**, 2-7, 4-12, 4-13, 4-14, 4-15, **4-20**, **4-21**, 5-25, **5-30**, **5-31**, **5-34**
Central stationary readoutZentrale stationäre Auslesung 0-4